



November 29, 2007

AGIA License Office  
State of Alaska, Department of Revenue  
550 West 7<sup>th</sup> Avenue, Suite 1820  
Anchorage, AK 99501

Subject: AGIA Application  
AENERGIA, LLC

Commissioners of Natural Resources and Revenue,

AENERGIA, a Limited Liability Company based in Alaska, is pleased to submit the attached Application in response to the RFA process implemented under AGIA. We believe that we have assembled a complete application which meets both the intent and the spirit of the AGIA process.

Our application is based on an aggressively *creative* ("outside the box") Project Plan with what we believe to be cutting edge Adaptive Management Procedures. Our general approach is to use a "mission paradigm" to create both urgency and efficiency in planning, design and construction.

AENERGIA has taken great effort to reduce the operational details of our Project Plan to the most basic and clear elements possible. We believe that a plan that is both "simple" and "transparent" will greatly increase the chances of the project's economic success and thereby maximize the benefits of a gas pipeline for the people of Alaska.

We recognize that there are several primary stakeholders, each with their own list of significant "must haves". We also recognize that there are important socio-political "must haves" (such as national security or building "green") that may or may not be represented directly by a stakeholder but should be addressed at all stages of modern design and construction operations.

We believe that our Project Plan presents an innovative Administrative Forum for straightforwardly blending all these "must haves" into a successfully competed project . . . on a firm and aggressive schedule and within a responsible and workable budget.

Respectfully submitted,

**AENERGIA, LLC**

---

William J. Burkhard, Principal Partner

---

Andrew L. Taber, Principal Partner

*3911 West Capitol Avenue, West Sacramento, CA 95691 (907) 770-5075*



November 29, 2007

AGIA License Office  
State of Alaska, Department of Revenue  
550 West 7<sup>th</sup> Avenue, Suite 1820  
Anchorage, AK 99501

Subject: AGIA Application  
ÆNERGIA, LLC

Commissioners of Natural Resources and Revenue,

ÆNERGIA, a Limited Liability Company based in Alaska, is pleased to submit the attached Application in response to the RFA process implemented under AGIA. We believe that we have assembled a complete application which meets both the intent and the spirit of the AGIA process.

Our application is based on an aggressively *creative* ("outside the box") Project Plan with what we believe to be cutting edge Adaptive Management Procedures. Our general approach is to use a "mission paradigm" to create both urgency and efficiency in planning, design and construction.

ÆNERGIA has taken great effort to reduce the operational details of our Project Plan to the most basic and clear elements possible. We believe that a plan that is both "simple" and "transparent" will greatly increase the chances of the project's economic success and thereby maximize the benefits of a gas pipeline for the people of Alaska.

We recognize that there are several primary stakeholders, each with their own list of significant "must haves". We also recognize that there are important socio-political "must haves" (such as national security or building "green") that may or may not be represented directly by a stakeholder but should be addressed at all stages of modern design and construction operations.

We believe that our Project Plan presents an innovative Administrative Forum for straightforwardly blending all these "must haves" into a successfully competed project . . . on a firm and aggressive schedule and within a responsible and workable budget.

Respectfully submitted,

ÆNERGIA, LLC

A handwritten signature in blue ink, appearing to read 'William J. Burkhard'.

William J. Burkhard, Principal Partner

A handwritten signature in blue ink, appearing to read 'Andrew L. Taber'.

Andrew L. Taber, Principal Partner

3911 West Capitol Avenue, West Sacramento, CA 95691 (907) 770-5075



Application for  
License to Build an  
Alaska Natural Gas Pipeline  
Under the  
Alaska Gas Inducement Act

**AENERGIA**  
3911 West Capitol Ave  
W. Sacramento, CA 95691  
(907) 770-5075



---

## TABLE OF CONTENTS

### PREFACE 5

|          |  |           |
|----------|--|-----------|
| <b>1</b> | <b>THE AENERGIA TEAM .....</b>   | <b>8</b>  |
| 1.1      | Background .....   | 8         |
| 1.1.1    | History .....  | 8         |
| 1.2      | Project Management .....   | 9         |
| 1.2.1    | The Project Nexus .....  | 9         |
| 1.2.2    | Critical Mission Management .....  | 10        |
| 1.2.3    | Task Orders .....  | 13        |
| 1.2.4    | Limited Use of Multi-layered Subcontracting .....  | 13        |
| 1.2.5    | Project-wide Insurance Policies .....  | 13        |
|          | Aenergia intends to pursue volume discounts on Project-wide insurance policies to reduce costs and eliminate double insuring. .... | 13        |
| <b>2</b> | <b>PROPOSED PROJECT .....</b>  | <b>14</b> |
| 2.1      | Project Description .....  | 14        |
| 2.1.1    | Pipeline .....   | 14        |
| 2.1.2    | North Slope Gas Treatment Plant .....  | 15        |
| 2.1.3    | LNG Project .....  | 15        |
| 2.1.4    | Gas Processing and NGL Markets .....   | 15        |
| 2.1.5    | Independent Midstream Ancillary Projects .....   | 16        |
| 2.1.6    | Contingent Projects .....  | 16        |
| 2.2      | Development Plan .....   | 16        |
| 2.2.1    | Front-End Engineering Design Plan .....  | 16        |
| 2.2.2    | Stakeholder Issues Management Plan .....   | 17        |
| 2.2.3    | Commercial Plan .....  | 18        |
| 2.2.4    | Regulatory Plan .....  | 23        |
| 2.2.5    | Local Project Headquarters Plan .....  | 25        |
| 2.3      | Execution Plan .....   | 25        |
| 2.3.1    | Project Execution Plan .....   | 25        |
| 2.3.2    | Managing Capital Costs .....   | 25        |
| 2.3.3    | Project Labor Agreement .....  | 25        |
| 2.3.4    | Alaska Hire .....  | 25        |
| 2.4      | Operations Plan .....  | 25        |
| 2.4.1    | Expansion .....  | 26        |
| 2.5      | Project Cost Estimate .....  | 28        |
| 2.5.1    | Cost Estimate for Development Phase .....  | 28        |
| 2.5.2    | Cost Estimate For Execution Phase .....  | 28        |
| 2.6      | Project Schedule .....   | 28        |
| 2.6.1    | Schedule for Development Phase .....   | 29        |
| 2.6.2    | Schedule for Execution Phase .....   | 29        |
| 2.7      | Risk Assessment and Mitigation .....   | 30        |



|                   |  |           |
|-------------------|--|-----------|
| 2.8               | Financial Plan.....  | 31        |
| 2.8.1             | Description of Applicant and Participating Entities .....                    | 31        |
| 2.8.2             | Demonstration of Financial Resources.....                                    | 31        |
| 2.9               | Performance History and Project Capability .....                             | 32        |
| 2.9.1             | History of Compliance with Safety, Health & Environmental Requirements ..... | 32        |
| 2.9.2             | Capability to Follow a Detailed Work Plan and Schedule .....                 | 32        |
| 2.9.3             | Capability to Operate Within a Cost Estimate .....                           | 32        |
| 2.9.4             | Integrity and Good Business Ethics.....                                      | 32        |
| 2.9.5             | Other Relevant Factors .....   | 32        |
| 2.10              | Project Viability.....   | 33        |
| 2.10.1            | Economic Viability.....  | 33        |
| 2.10.2            | Technical Viability.....   | 33        |
| 2.11              | Proposed Reimbursement .....   | 34        |
| <b>3</b>          | <b>CONCLUSION.....</b>   | <b>36</b> |
| <b>APPENDIX A</b> | <b>APPLICATION CROSS-INDEX .....</b>   | <b>37</b> |
| <b>APPENDIX B</b> | <b>CERTIFICATIONS.....</b>   | <b>45</b> |
| <b>SIGNATURE</b>  | <b>SIGNATURE.....</b>  | <b>46</b> |

## **PREFACE**

This application by AENERGIA, LLC, which we believe to be complete and in accordance with AGIA guidelines, will likely require most readers to make a paradigm shift from previously experienced models of how to approach the design and construction of a gas pipeline. The shift is actually not so much of a change in *what* things are needed to be done, because the same technical issues are going to be faced by any applicant and probably will be pretty much solved by the same group or groups of technical experts and construction engineers. No, the shift to be made is more of a change of emphasis and approach in the process of *how* the technical things, the solutions to financing, development, design and construction, *are performed*. To AENERGIA's view, this actually turns out to be a logical outcome of the process begun by AGIA.

AGIA, "boiled down", was created to establish equity in the relationships of the ANS stakeholders and then, of course, to get a gas pipeline built. AENERGIA proposes a Plan which settles the equity issues first, as simply and clearly as possible, and then provides a "guide" which sets the process of how the technical issues are to be solved as they are developed into objectives by a Nexus of stakeholders.

Our belief, as technical practitioners ourselves, is that sophisticated modeling or calculations performed prior to data gathering do not necessarily provide or predict the best answers in themselves. But if you have the *how* to get answers in place, you will get better answers to the inevitably changing and developing issues as part of a process. The AENERGIA approach is more of a Plan (a structure) for developing the plan than a rigid plan in itself. We believe that there are verifiable and quantifiable benefits to this shift in approach.

Instead of a plan where a well-financed pipeline builder requires a very high rate return on investment because of anticipate project complexity and risk, AENERGIA represents using AGIA to manage the design and construction of the ANS gas pipeline as a Public-Private Partnership. As the licensee, AENERGIA will be empowered to "negotiate" for the best rates possible on investment capital based on a fair and reasonable underwriting of the project (in other words, equity capital instead of speculation capital). Instead of stakeholders "fighting for their share of the pie", all portions are already set so the stakeholders have only incentive to cooperate and make the project go well. Instead of design being driven by short term dollar decisions or how to get greater mark-up values (profits), AENERGIA represents leading with science, going for the best solutions, considering all types of costs like social and environmental as well as financial, looking for answers which will serve the people of Alaska best. Instead of managing construction so that if costs run up, investors actually can get greater total returns. AENERGIA represents the most innovative, efficient, cost cutting management principles being practiced today, Critical Mission Management (CMM). Instead of public relations being performed on a "need to know" basis where private knowledge keeps "power" private, AENERGIA represents a simple, open, transparent plan/process where financial books are available to the public and "closed" weekly for ease of auditing.

## **SUMMARY OF THE KEY COMPONENTS OF THE AENERGIA APPLICATION**

Beyond the innovative concepts that AENERGIA presents in this application, it fundamentally claims the "ability to perform" as the AGIA Licensee based on the qualifications of its principal partners, Bill Burkhard and Andy Taber.

Mr. Burkhard is a University of California graduate in engineering. He has spent the last near twenty years on various agency staffs within the State of California's Department of Water Resources as a licensed Civil Engineer.



For the last five years he has been Incident Manager (Incident Commander of the Delta Incident Management Team) for flood fights in the Sacramento/San Joaquin Delta Region, where he was charged with protection of the drinking water supply for two-thirds of the world's eighth largest economy, California. Mr. Burkhard has built an extensive joint Federal-State-County-Private response team with the ability to respond with 250 flood fighters on-the-site the same day of an incident, 1000 on the second day, and at least 3000 on the third. Mr. Burkhard and his teams have fought dozens of floods and never lost a flood fight. Mr. Burkhard's innovative adaptation of SEMS/ICS, his training programs and his team building have saved Californians many hundreds of millions of dollars in repairs and reduced losses and, of course, successfully protected the state's water supply.

It has been during this tenure that Mr. Burkhard has learned about California Fire's SEMS/ICS (Standard Emergency Management System/Incident Command System) program where numerous complex asset acquisition and deployment issues can be handled effectively and efficiently in a systematic fashion. He borrowed heavily from California Fire's approach to develop his flood fight teams and approach. He also became adept at managing public-private partnering between Federal, Military, State, County, Local Governments, private enterprise and landowners. in extremely critical situations. He also followed California Fire's lead in pre-establishing working relationships between the various parties that might become involved in a natural disaster, such as the Army, Navy, Air Force, Coast Guard, National Guard, FEMA as well as with many State agencies. Mr. Burkhard was able to get signed an unprecedented five-county OES perpetual MAC Agreement to cooperate in flood fight in his operational area.

Because of success of California's programs, the Federal government has recently implemented a national program based on SEMS/ICS called NIMS.

ÆNERGIA presents this experience with SEMS and public-private partnering as excellent background for navigating what we hope to be the next platform for an innovative application, the gas pipeline. We are excited about the cutting edge adaptation of critical incident management protocols, what we are calling Critical Mission Management (CMM), to a new kind of public-private partnership venue, a gas transportation system.

We believe Mr. Burkhard is especially well qualified to make this adaptation to a pipeline as he was a part of the earth sciences group that worked on the previous Alaska gas pipeline project in the late 1970's-early 1980's, Mr. Burkhard already has firsthand knowledge of this large pipeline project.

Mr. Taber has a graduate degree in Administration of Business from the University of California. He has been an executive officer of one of the nation's older geotechnical engineering firms, Taber Consultants (formerly Moore & Taber), for over twenty-five years and its chief executive for over ten. Much of the firm's practice is centered on Public Works; the firm has averaged well over a bridge foundation study per week for every week since its formation in 1954. As a result of this emphasis, Mr. Taber has been directly involved with numerous contract negotiations/implementations with many different consulting firms and public agencies of all levels, from federal to local.

Examples of Mr. Taber's relevant project experience include negotiating and managing three consecutive multi-year IDIQ contracts with the Sacramento District of the Army Corps of Engineers, negotiating and managing a data gathering contract with Caltrans for seismic re-evaluation of existing California toll bridges such as the Coronado Bridge in San Diego and the Bay Bridge in San Francisco and negotiating and managing the data gathering portion of a hybrid design-build bridge retrofit (Richmond-San Rafael Bridge) with Caltrans where a project insurance policy was employed to reduce project risk exposure.

To reduce risk from internal company practices and procedures, Mr. Taber has implemented a Peer Review of the firm every five years for the last twenty years. Mr. Taber has a particular interest in Professional Liability risk where he attends annual meetings of the insurance company his firm helped to found, Terra Insurance.





Beyond the executive skills developed over years of experience, one of the particular strengths Mr. Taber brings to AENERGIA is his experience in networking with other firms, forming teams to accomplish tasks that are greater than the firm could perform on its own and then leading the team to successful completion of its goals.

Mr. Burkhard and Mr. Taber have together been pursuing a role in the gas pipeline for about eight years (primarily through their partnership in GSS, a geotechnical instrumentation company). During that time they have used their professional “networks” to make contact with many senior design professionals as individuals and with several west coast and Alaska firms. Of particular interest are the twenty or so senior design professionals who worked on the previous gas pipeline project and have agreed to be on the AENERGIA team this time around.

Both Mr. Burkhard and Mr. Taber are prepared to devote full-time to AENERGIA should it be awarded the license.

We are confident that AENERGIA not only has a plan that will work, but that we can procure, the human resources with the necessary skill sets for successful completion of the various tasks required by such a complex project.

The AGIA framework has brought together the elements of a gasline together in such a way that the AENERGIA Plan simply fashions them into a gas transportation toll-way project with a Public-Private-Partnership. The process within that framework will work so well, AENERGIA is happy to say a universal “yes” to the commitments required of the AGIA Licensee.

**Other key components of the AENERGIA Plan include:**

- The Stakeholders, having the right and obligation to steer the project, are formally brought together in a Project Nexus to collaboratively set objectives.
- The positional strength generated for AENERGIA from receiving the license will propel the one simple transparent deal forward at the Nexus. As stakeholders represent their “must haves”, pursuing their interests, they will at the same time be making their part of the mission complete . . . and everyone wins together.
- The AENERGIA Plan proposes that the Public-Private-Partnership form two companies, one for design, construction, operation and maintenance of the gas transportation system and the other for the cooperative sale of ANS gas. In the charters of both companies, the declaration of purpose will include that they are to be operated in a revenue-neutral manner for zero profit effectively making the project an at-cost public service project.
- The AENERGIA Plan reduces operation, ownership, and revenue stream of the complex pipeline project down to one, simple, transparent deal. The contract carrier pipeline company and the gas shipper company have an exclusive contract and are kept at the same proportionate ownership share. One simple ownership **distribution factor** determines how **all** the proceeds from the sale of ANS gas are distributed.
- Cash investment in development, design and construction of a pipeline is not reflected as ownership but represents an “investment opportunity”, more like a federally insured annuity, with ROI determined through negotiations with FERC and such depreciation as can be made available by the gas pipeline company. With this arrangement, the cost of money should be kept to a minimum.
- The AENERGIA Plan calls on the existing ANS gas producers to be the primary source of cash investment because it is their fundamental economic interest to see that a pipeline gets built to



transport their gas to market and they are already in the business of assuming many of the same risks as the Project's risks. Second choice for funding would be from mutual utility districts that also have at least a two-level interest in seeing ANS gas get to market. Third choice would be either public funds or "Wall Street".

- When new producers wish to be added to those transporting gas through the pipeline (or the gas ownership mix changes), the ownership of the pipeline company is simply changed to match the ownership of gas carried by the pipeline. The costs of operation and maintenance of the Project continue to be borne by the owners proportionate to their share of the gas shipped.
- The AENERGIA Plan postulates that solutions to engineering challenges will come out with a greater true economic advantage if they are solved with the best science, not with an apparent most advantageous economic-based decision. AENERGIA's plan is to attract resources during the period of competitiveness rather than the speculative period before the application.
- The AENERGIA partners' backgrounds and the skill-sets are available to lead the Nexus.
- Critical Mission Management is based on a new paradigm of how to manage a large public-private project. AENERGIA's plan is to translate what has been learned by two state agencies in California, California Fire (fighting forest fires) and Department of Water Resources (fighting floods) into a design and construction management process where this project is managed similarly, as a single-minded mission. CMM provides an open and transparent environment where there is accountability, reduced risk, and focused efficiency. Decisions are made at the level where the best knowledge for the decision is available.
- The choice of the Canadian partner will be ratified by the Project Nexus.

This plan provides one simple, clear, and transparent deal for where two companies are formed. One company cooperatively markets the gas and has an exclusive at-cost contract with the second who ships the gas. Both companies perform these services with neutral revenue on behalf of the gas producers and the state, ultimately returning 99% of the net revenue to the resource owners

## **1 The AENERGIA Team**

### **1.1 Background**

#### **1.1.1 History**

During the original design effort of the Alaskan Natural Gas Pipeline, members of our present "core group" were the major portion of the senior and staff-level personnel of the two consulting firms that were providing Fluor with technical expertise in geology, civil engineering, geotechnical engineering, hydrology, climatology, and thermal modeling. By project's end, we had completed about 70% of the alignment geology, 50% of the surface and groundwater hydrology, 30% of the geotechnical engineering including thermal modeling and climatology, and a substantial portion of the environmental work. In 1982, after the project was terminated, we went on to further our careers with other firms. In 1982, when the project ended, we went on to pursue careers with other firms. Although we moved to positions throughout the West and Midwest, many of us kept in touch because of the strong relationships built during our "pipeline" days.

In 2001, when new discussions of building an Alaskan pipeline began to draw media attention, several of us contacted our previous employers to see if there would be any possibility of once again working on the pipeline. We discovered that they had essentially "moved on" as well and had no real interest in pursuing

the work again. So, in the fall of 2001, we reassembled the core group and creating a new team to pursue the design work should the project actually start up again.

As the project began to take shape, we rounded out and expanded our team to more extensively tackle the earth sciences challenge adding in the best in the industry in our own fields as well as specialists in seismology, environmental planning and defense.

After the Gas Consortium walked away from the considering the *project* we began talking to others who may be involved it building the pipeline. This allowed us to build relationships with Williams, Flour, WorleyParsons, Bechtel, the JPO, DNR, and others in Alaska, Houston, and Salt Lake City. Further planning and preparations led us to build working relationships with the BP, ConocoPhillips, and ExxonMobil. Over the years, we have met numerous times with the producers to discuss details of designs and project management.

## 1.2 Project Management

### 1.2.1 The Project Nexus

The Project Nexus is a drawing together and formalizing of partnership relationships that already exist between various entities because of constitutions, statutes, business partnerships, stakes, regulations, and/or common purposes. The Project Nexus simply solidifies and defines these relationships and draws the members together at a common table for the purpose of steering the ANS Gas Project.

The *Project Nexus* is where the stakeholders bring their “must haves” (their desired outcomes) and translate them into Project Objectives in accordance with their specific stake. The Project Objectives become the Project Plan (which **AENERGIA chooses to call the Project Mission**). One of **AENERGIA’s primary project roles**, as the Licensee and a Project Nexus stakeholder member, **is to chair this Nexus and lead the partners through a successful objective setting process**. **AENERGIA**, will also provide the leadership for the Project Mission and represent the quality of build, alignment issues, and equity of the Stakeholders at the Nexus.

While the AGIA License is the State’s delegation of authority to execute the mission and build the *Project*, the *Project Nexus* is the formal path by which all the authorities hand down their respective binding mission objectives to the Licensee and to proactively address conflicts before they become roadblocks.

The *Project Nexus* is formed with representatives from the primary Stakeholders, each with authority and responsibility to affect change to the design and operation of the Project. Stakeholder means a person, group of persons, or entity with *Stake* which has a particular substantial and legitimate risk, impact, or financial interest in the *Project* plan. A primary Stakeholder means a stakeholder whose authority is not delegated from a higher authority but the authority is innate by resource ownership or is given by statute or constitution and the Stakeholder is answerable only to its own constituents. The equity provider is also considered a primary Stakeholder since they have sovereign authority over the expenditures of their funds. Each stakeholder is responsible to provide their chosen, singular representative to the Nexus.

While the AGIA License is the State’s delegation of authority to execute the mission and build the *Project*, the *Project Nexus* is the formal path by which all the stakeholders hand down their respective binding mission objectives to the Licensee. The Project Nexus, under **AENERGIA**, (the lead stakeholder as Project Manager and Chair and host of the Project Nexus) brings all authorities together to form a directorate team for the Project. Governance is based on collaboration (with the purpose of setting Project Mission objectives) and proactively addressing conflicts before they become roadblocks. Project Mission Objectives outcomes are governed by statutes, regulations, constraints of the natural world, limits of fiscal viability, and/or the desires of the Project underwriters.

All authority for executing the *Project Mission* is delegated to the AGIA Licensee by each of the primary Stakeholders of the *Project Nexus*. Additionally, the AGIA License implies executive authority for the administration and operation of the Project; however, conflicts can arise from cross-purposes of primary or delegated authorities. When direct negotiation cannot provide for an essential administrative or operational directive, the resolution is sought from the *Project Nexus*. In the *Project Nexus*, subordinate delegated authorities are represented by their delegators. *Project Nexus* representatives from the Stakeholders will be a delegate which has full authority and responsibility to speak for their Stakeholder in the decision making process.

Determining direction by the *Project Nexus* is unlike that of a board of directors which would set directives by cooperative consensus. By contrast, the *Project Nexus* will collaboratively set mission objectives at each phase of the *Project* by hierarchy of authority within each *Stake*. Complete documentation follows the setting of *Project* objectives to guarantee an open and transparent process. If a *Nexus* member has no authority in a particular *Stake*, there is no objective setting by that authority. AENERGIA will oversee the implementation of the mission objectives into the Project and maintain a “veil of delegation” to isolate the Stakeholders from the liabilities associated with their implementation. All Project reporting will be done primarily or secondarily to AENERGIA for the *Project Nexus*, dependent on the objectives set by the *Project Nexus*, or by the direction of AENERGIA. AENERGIA will maintain the flow of information for the Project by distributing information to all primary Stakeholders of *Project Nexus* in a timely manner.

The features and benefits of the *Project Nexus* configuration are:

- Progressive and adaptive project controls
- Effective decision making and objective tracking including documentation of activities
- Dissipation of litigation risk
- Single point of regulation
- “Clean Hands” of all participants by providing a comfortable one-degree of separation from other *Project Nexus* members and from Project implementation on politically charged issues
- Transparency, simplicity, and documentation of process
- Minimal legal agreements (e.g. no JPA required to form this type of joint directorate) because authorities remain unaltered and uncompromised by binding cooperative agreements.
- The fostering of proactive and collaborative leadership on a project critical to the future of Alaska and the nation.
- Provides avenue for Critical Mission Management towards Project completion
- Provides Stakeholder position for Native Peoples of Alaska
- Incorporates sharing of technical and operational knowledge between Stakeholders
- Provides for discussions and abilities to prevent or reduce Project cost overruns
- Provides Project integrity and good business ethics fostering public and governmental support

Through effective Critical Mission Management, AENERGIA will maintain its fiduciary duty with the objectivity of science and ensure compliance with regulations, statutes, and objectives governing the Project.

## **1.2.2 Critical Mission Management**

. The failure of the response following Katrina was likely in part the result of the State of Louisiana depending on normal administrative processes to address the natural chaos of a hurricane. By contrast, the success of California’s responses to the floods of 2004 and 2006, where 2/3 of the State’s drinking water supply was threatened, as well as to the firefights of 2007 near San Diego and Los Angeles are all due to California’s use of specialized incident management teams. From experience with this very successful organizational structure AENERGIA has developed a Critical Mission Management (CMM) Team.

A CMM Team is a powerful personnel deployment formation developed around critical tasks or objectives. The “parent” of CMM, the Incident Command System, has evolved over decades of reinvention by necessity and has recently been adopted nationally, (NIMS). It has proven itself to be a highly efficient form of adaptive management and successfully meets objectives in unpredictable and changing environments. Variants of CMM are particularly well suited for use at highly visible and publicized projects such as those utilized during NASA’s space flight missions and during large scale emergency responses such as wildlands firefighting, major earthquakes and flood fighting activities. CMM is also particularly well suited to manage the interface between multiple public agencies and private enterprises when dependence on relationships is required for success.

ÆNERGIA itself is comprised with this same team concept. It utilizes key management personnel in the command staff with effective and progressive leadership skills. The ÆNERGIA Critical Mission Management Team will develop its members to fulfill team position roles with professionalism and expertise. Members within each assignment will perform at the highest level necessary for the successful completion of all objectives towards completing the Project.

The power of a CMM Team is derived from accountability to an objective rather than accountability to a process. This simple concept empowers individuals to reach beyond their typical capacity to creatively meet objectives through personally adopted tactics. In this environment, talented and committed individuals will exceed normal expectations. The key to a CMM Team’s ability to function is the team’s ability to recognize, tap into and depend on each team member’s unique talents and abilities. Effective leadership and the strength of the team are derived from the synergy of group dynamics.

In order for the Team to function successfully for this magnitude of a project, each team member must commit to the highest level of integrity and performance and assume a fiduciary duty to the project.

From the definition of *fiduciary* in Wikipedia:

*A fiduciary duty is the highest standard of care imposed at either equity or law. A fiduciary is expected to be extremely loyal to the person to whom they owe the duty (the "principal"): they must not put their personal interests before the duty, and must not profit from their position as a fiduciary, unless the principal consents. The fiduciary relationship is highlighted by good faith, loyalty and trust, and the word itself originally comes from the Latin fides, meaning faith, and fiducia.*

*When a fiduciary duty is imposed, equity requires a stricter standard of behavior than the comparable tortious duty of care at common law. It is said the fiduciary has a duty not to be in a situation where personal interests and fiduciary duty conflict, a duty not to be in a situation where their fiduciary duty conflicts with another fiduciary duty, and a duty not to profit from their fiduciary position without express knowledge and consent. A fiduciary cannot have a conflict of interest. It has been said that fiduciaries must conduct themselves "at a level higher than that trodden by the crowd".*

The “principal” to whom loyalty is due as referred to in the Wikipedia definition, is the Project Nexus. The Project Nexus will only work successfully if it is supported by our CMM Team organization. CMM will only work if overseen by a Project Nexus type of organization, because of the “objective” style of collaborative and authoritative interchange between the two groups. On the other hand, in contrast, if there is a cooperative consensus group over a CMM Team, the CMM Team would likely decay into an administrative organization developing processes to fulfill directives. If there was an administrative organization under a Nexus style group, the Nexus would likely become ineffective in its leadership due to the lack of developing clear directives, which may require even further clarification and operational approvals to complete an objective.

Through the logical division of assignments into sub-objectives, the Team structure is grouped into well defined and identifiable categories that match innate abilities and talents of the team members. Team

trust and dependence, on all team members, encourages each of the team members to rise to the challenge before them and fulfill their role in the community of the team. This synergy makes it possible to overcome obstacles and successfully reach team objectives. The AENERGIA CMM Team fosters and rewards the creativity and ingenuity needed for innovation, while maintaining the protocols that enforce strict standards for documentation, execution, safety, technical competency and fiscal accountability for the reduction of risk and Project defensibility.

A CMM Team is most efficient at bringing order to the unexpected. AENERGIA utilizes a metric for the CMM's Team effectiveness and responsiveness, termed CPR, a "yardstick" to assess the Team:

- **Capability** – the scope and extent of the ability to respond and adapt effectively
- **Preparedness** – the practiced ability to respond appropriately
- **Readiness** – the ability to respond immediately

Once order is established and the threats of unknown consequences have diminished, the Critical Mission Management Team remains best suited to maintain the established order for the long term. AENERGIA's CMM Team is well suited for both the unexpected and for the normal operating procedures which will both be encountered on this Project. The true definitive significance of the functionality of the Team is its total adaptability within all objectives of the Project.

The functionality of a CMM Team is best understood when it is compared and contrasted to a typical administratively operated business organization:

- CMM is well suited and adaptable to meet the requirements due to project magnitude, time constraints, large number of personnel resources, large number of equipment resources, totality of assets, and multiple funding sources to support the Project, which would overwhelm the normal equivalency of a typical administrative organization;
- CMM initiates and empowers decisive, competent action in real time for all subordinate functional operational sections, then completes the documentation and justification versus the administrative necessity to document a problem and have pre-approval for all actions from upper management prior to any implementation..
- CMM has a command staff with direct subordinate groups which function by passing down objectives rather than by passing down directives, as in an administrative organization.
- CMM incorporates operational decisions made at lower levels where there is the highest level of understanding to accomplish objectives versus the well documented Peter Principle in administrative organizations.
- CMM's organization structure is built from decades of reinvention in the emergency services world, aimed at continuous improvement in responsiveness, safety, accountability and total performance.
- CMM utilizes the approach "*Objective accomplishment is everything*" versus the Administrative "*pre-approval and process is critical*" organization.
- CMM provides a built-in structure which mitigates and defuses risks as they occur versus The Acceptable Risks of the standardization of processes.
- CMM is designed for extreme adaptability, regardless of what unusual or unknown circumstances may occur. Team organization and functionality increases or decreases with the demands of the objective at hand.



A critically needed Project with the magnitude of the Alaska Natural Gas Pipeline requires an innovative approach beyond 'typical' business practices. AENERGIA will provide an organizational structure that not only meets but exceeds usual business practices utilizing the Critical Mission Management Team concept, working in concert with the Project Nexus.

### **1.2.3 Task Orders**

AENERGIA will manage the Project through the use of Task Order contracts with multiple vendors where appropriate. With task orders contracts, one master contract is issued specifying the terms of the contract but does not have a scope of work or funding. Task orders are issued under the master contract and specify the scope of work and the funding.

### **1.2.4 Limited Use of Multi-layered Subcontracting**

As a cost saving measure, AENERGIA intends to limit subcontractors using subcontractors and adding a markup that brings no value. Such practice also double-insures the subcontractor's work without adding value.

It is intended that most contractors will have contracts directly with Alaska Natural Gas Line, LLP.

### **1.2.5 Project-wide Insurance Policies**

AENERGIA intends to pursue volume discounts on Project-wide insurance policies to reduce costs and eliminate double insuring.

The cost-effectiveness of self-insuring will be explored in areas where the risks mitigated by the insurance do not justify the cost of the insurance.



## 2 Proposed Project

### 2.1 Project Description

The Project includes a pipeline and related facilities that would have an initial design capacity to treat and transport approximately 4 BCFD of Gas from the North Slope to Alaskan and North American markets. Although specific design details and features are likely to change as the Project advances, the Project would consist primarily of:

- **Gas Transmission Pipelines.** Gas transmission pipelines that would deliver Gas to the Gas Treatment Plant (GTP) or the Mainline from Upstream Facilities:
- **GTP.** A gas treatment plant, located on the North Slope, which would be designed to remove certain impurities and fractions as necessary and return them for injection or other disposition, including enhanced recovery; and compress and chill the treated gas to meet Mainline specifications.
- **Alaskan Mainline.** A large diameter gas pipeline located in Alaska that would transport gas from the GTP on a route generally along the TAPS pipeline and the Alaska Canada Highway. It is likely to be designed to operate as a high-pressure pipeline. Compressor stations would be placed at regular intervals along the route to maintain pressure and temperatures.
- **Delivery Points.** A minimum of five (5) delivery points will be constructed in the State of Alaska (AS 43.90.130 (12)) at locations determined by the Project Nexus and will offer firm transportation service to these delivery points as per AS 43.90.130 (13).
- **NGL Plant.** Potentially, a processing plant that would recover NGLs for sale and condition the gas to meet downstream market specifications. An NGL Plant may be a newly constructed Facility or an existing Facility. An NGL Plant may be located in Alaska, Canada or the Lower 48.
- **Canadian Facilities.** Gas transported through Canada may utilize existing Canadian facilities. The existing facilities may include pipelines, hubs, compressor stations, and storage along with the appurtenant structures and facilities.
- **Alberta to Lower 48 Project.** Potentially, a new Gas pipeline, or expansion of existing pipeline systems that would be used to export gas from Alberta, Canada to the Lower 48.

A more detailed overview of the Project's conceptual design and the design parameters is found in section 2.10.2, titled Technical Viability.

#### 2.1.1 Pipeline

AENERGIA commits to conceptual design of the pipeline to carry natural gas from the Alaska North Slope through Alaska and Canada to existing transmission facilities in the lower 48 states of the United States. The proposed route will parallel the TAPS line from North Slope to Fairbanks, Alaska. From there, it will parallel the Alcan Highway to the Canadian Border.

Once in Canada, the gas transport system is envisioned to use new and existing facilities to continue following the Alcan Highway then passing south through Alberta to an existing hub. The system will most likely use many of Canada's existing infrastructure including mainlines, hubs, and storage facilities. Various Canadian facilities will need to be expanded to handle the increased capacity. New Canadian



facilities will also likely need to be constructed to transport the gas from the Alaskan/Canadian Border to existing infrastructure in the conterminous 48 states.

The pipeline will likely be buried for most of its alignment to protect it from sabotage and vandalism. Since the pipeline will traverse frozen and unfrozen regimes in Alaska, design will need to minimize thawing and freezing impacts.

The gas transport system will have at least five (5) delivery points in the State of Alaska to serve the markets of Alaska. The remaining gas will be delivered to hubs in the free market of the US and Canada.

The preliminary conceptual design is a pipeline of the following approximate specifications:

- 4' to 4.5' diameter
- 1.125" - 1.25" wall thickness
- X-80 or X-100 steel or composites
- 3000 PSI
- Near ambient operating temperature

Exact specifications will be developed during the FEED to maximize cost-effectiveness and minimize environmental impact. The operating temperature is critical for minimizing the impact when in frozen and semi-frozen environments.

AENERGIA commits to the design intent of gas transport facilities to include some pre-build of the expansion capacity. The amount of pre-build will be determined as a balance between the:

- Capitalization of the construction of the future expansions;
- Limitations on raising the tariffs;
- Location of and size of downstream markets (Alaska vs. lower 48)
- Net present value of the expansion;
- Timing of the expansion; and
- Estimated remaining reserves needed to maintain pipeline capacity for duration of the life of the Project.

- Compliance with applicable State and Federal laws and regulations

The exact amount of the pre-built expansion capacity will be determined during the FEED and ratified by the Project Nexus.

Further conceptual design details are outlined in section 2.10.2, Project Viability

### **2.1.2 North Slope Gas Treatment Plant**

AENERGIA commits to build and include a North Slope Gas Treatment Plant in the ANGL facilities. The Gas Treatment Plant that will provide gas treatment services to accommodate the initial mainline specifications and design capacity and will not limit future expansion.

### **2.1.3 LNG Project**

AENERGIA does not commit to include LNG facilities but will commit to accommodate independent LNG ancillary projects as described in section 2.1.5.

### **2.1.4 Gas Processing and NGL Markets**

Mainline gas composition will be determined during the FEED when the increased costs of shipping, extracting, and marketing of the different levels of NGL and other gaseous fractions will be compared to the revenue generated by the effort. The final gas composition will be determined so as to maximize the benefit to Alaska.

NGL extraction facilities may be located in Alaska, Canada, or the lower 48 States depending on the market. Where ever the facility is located, the NGL will be marketed through “North Slope Gas Cooperative”.

During the FEED, the marketability of natural gas liquids, liquefiabiles and other gaseous or non-gaseous by-products of the natural gas stream that are not admitted into the mainline will be considered for inclusion in the Project.

### **2.1.5 Independent Midstream Ancillary Projects**

The *Project* will accommodate delivery connections to independent Alaskan projects such as a spur to the Kenai Peninsula or a spur to Valdez for LNG export. Ancillary projects will be responsible for all additional costs beyond the delivery point connection.

The *AGIA Coordinator* will determine whether the delivery point on *Mainline* required by an ancillary project qualifies as one of the five delivery points as required by AS 43.90.130 (12) and described in sections 2.1.1 and 2.2.3.9. If this delivery point does not qualify as one of the five required by AS 43.90.250, the independent ancillary project will reimburse all the costs of the design and construction of the delivery point and related structures. The proposed system of tariffs is sufficient to equitably provide the gas and provide for the O&M of the delivery point.

### **2.1.6 Contingent Projects**

As the *Project* progresses, contingencies will be considered, studied, accommodated and/or pursued as the political and commercial environment changes. The *Project Nexus* will be responsible for setting the objectives.

## **2.2 Development Plan**

### **2.2.1 Front-End Engineering Design Plan**

The Front End Engineering Design (FEED) is an initial phase of the Project, executed under the management of the AENERGIA's CMM team. The CMM team will develop the scope, timeline, and objectives for the FEED team.

AENERGIA will likely subcontract the FEED to one of the major petrochemical contractors involved in pipeline and plant design as well as arctic design and construction.

The FEED team will be a combination of these groups likely subcontracted directly to Alaska Natural Gas Line (ANGL) with a minimum of overheads associated with multiple layers of subcontracting. The FEED team will report directly to the CMM team.

The FEED team will

- Gather and analyze all existing data

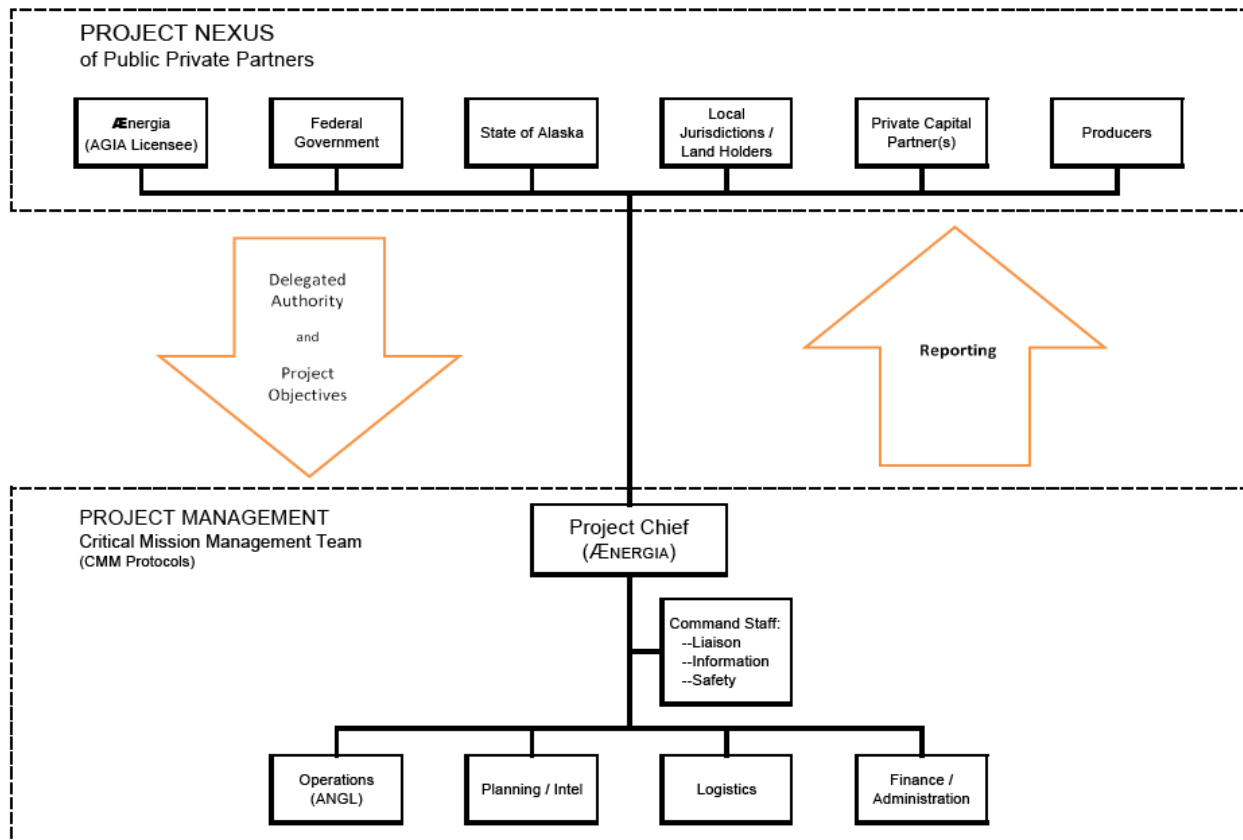
- Suitability for use in the FEED and production design
- Identify data gaps where insufficient data exists to finish the FEED
- Gather data to fill critical data gaps
- Field work
- Technical Research
- Gather design limitations:
  - Earth sciences and environmental sciences including environmental impact
  - Regulatory and permitting
  - Right-of-way, land ownership
  - Route selection
  - Socio-political, archeological, tribal, etc.
  - Resource, logistical, economic, etc.
- Research Canadian facilities to determine what expansion of their facilities must take place to accommodate the Project capacities
- Research availability can costs of materials needed to construct ANGL
- Explore alternative materials that may provide cost-effective solutions.
- Perform research of the natural gas and NGL markets
  - North Slope gas field source quantification
  - Alaska in-State needs (as per ANGPA) and future needs
  - Canadian needs
  - Lower 48 needs
- Evaluate the ability of the Project to generate revenue from those markets.
- Develop design parameters, goals, objectives, and limitations
- Develop sizing options, gas composition, locations and sizes of delivery points, rating curves, etc. and cost curves
- Identify cost-effective specifications for final design
- Identify major design and construction physical hurdles such as:
  - Physical such as the Brooks Range and Yukon River
  - Earth Science and Environmental such as permafrost and endangered species
  - Construction such as logistical and resource supply
- Parse design into work groups
- Develop cost estimates

The final design specifications will be ratified by the Project Nexus.

## 2.2.2 Stakeholder Issues Management Plan

AENERGIA will use the Project Nexus to manage Stakes and Stakeholders issues as shown below. Critical Mission Management (CMM) will be used to implement the Project Nexus objectives and regulations into the Project. Stakeholders will have two avenues to resolve issues. The first avenue is for resolving general direction issues and is accomplished through setting objectives in the Project Nexus at the regularly scheduled meetings.

The second avenue is objective implementation issues and is resolved through the Liaison Office. These issues and are generally non-controversial issues that do not require a change in Project Objectives.



## 2.2.3 Commercial Plan

AENERGIA commits to the methodologies outlined in Section 2.2.3.4

### 2.2.3.1 Plan Prior to Open Season

Prior to Open Season, AENERGIA will pursue fixing the initial capacity and mainline gas specifications (composition and quantity) through the FEED process (see section 3.2.1). As soon as AENERGIA is reasonably sure that the gas specifications will not change, then AENERGIA will pursue the Open Season according to 18 CFR 157 and other applicable laws.

### 2.2.3.2 Plan for Open Season

AENERGIA commits to conclude such a binding open season (which may not be more than thirty-six (36) months following the date the License is issued) in compliance with 18 CFR 157.

These are issues that will need to be resolved by the Project Nexus stakeholders as part of the Nexus process.

### 2.2.3.3 Precedent Agreements

The existing contract between North Slope Gas Cooperative and the ANS Gas Producers specified in the next section will remain in effect prior to Open Season and serves to set the terms of the Open Season. The remaining capacity will be available for allotment through the Open Season process.

### 2.2.3.4 Proposed Services and General Tariff Terms

The intent of this AENERGIA application is to construct a simple and extremely efficient monetization system for dealing with the North Slope energy resources; 99% of the net revenue generated at the wellhead is to be returned to the State of Alaska and resource owners on the North Slope. Fundamental to this design is to put all profits into One Simple Transparent Equity Ratio (OSTER) which allocates all equities and net revenues of the gasline Project. All other debts, equities, revenues, etc. are intentionally equitized to as close to zero net value as possible.

The OSTER is set at 74% to the Natural Gas Producers, 25% to the State of Alaska and 1% to AENERGIA. The OSTER also serves as a guide for the division of ownerships for Alaska Natural Gas Line, LLP (ANGL); North Slope Gas Cooperative (NSGC), the gas owners cooperative, and the ownership of the natural gas shipped in the ANGL mainline. All gas as it enters the mainline will be accounted for according to the OSTER, the State of Alaska will take its share of the revenue as royalty-in-kind.

ANGL is a limited liability company designed (chartered) to build, operate and maintain a gas pipeline at a breakeven profit/loss so as to perform as a nonprofit public service to Alaska and developers of the North Slope energy reserves, to maximize their revenue stream. A not-for-profit energy transport system will also greatly encourage further development of the North Slope reserves by maximizing returns on investments and make more exploration ventures economically viable.

ANGL tariffs at each distribution point will be only the cumulative capitalization and O&M costs of each upstream reach and feature without any markups or profits. Ownership of ANGL will be according to OSTER which is identical to the ownership of the natural gas being shipped.

Depreciation will be assigned to the capital investors in proportion to their capital investment in ANGL. NSGC is also a not-for-profit limited liability company formed to be a cooperative of the resource owners of the gas that flows in ANGL. Control and ownership of NSGC will be in accordance with OSTER. The organization will operate similar to a cooperative and have a mutually exclusive contract with ANGL for shipping their gas. NSGC will jointly own the gas in the ANGL line, market the gas at the delivery points, pay the tariffs to ANGL (and others as appropriate), and return the net proceeds to the resource owners according to the gas ownership as it is accounted for in the gas pipeline.

As natural gas enters the Project from its various sources, the ownership of the natural gas is divided up and accounted for according to OSTER. Each individual producer becomes a proportional owner of the "producers" percentage of the natural gas OSTER, according to their percentage of the total volume of gas being shipped. The basis for measuring volume of natural gas will be "corrected" according to actual BTU's of the gas as provided by a producer. The natural gas volume in ANGL is considered "stock" and is owned by ANGL. Purchase of this "stock" and losses of "stock" will be capitalized over a year at the average downstream price during the capitalization period.

#### IF THE PRODUCERS ARE THE CAPITAL PARTNERS:

When the Project applies for the FERC license, the requested return on investment will be set at four times the Alaskan property tax to equitize the net revenues to the OSTER.

To equitize the Capital Partner Producers with Non-Capital Partner Producers, the rate request from FERC for the repayment interest rate of the “70% debt” will be the Wall Street Journal Prime Rate plus a percentage that will cause the NPV to be identical to the Prime Rate of the full debt over life of the loan. This will equitize the debt between the Producers types and equitize the debt risk into the net revenues of the gas. This approach drives the equity among participants to the OSTER and the low rate is reasonable because much of the financial risks have been mitigated by the Federal loan guarantees. Furthermore, the lower return rate will be reflected in lower tariffs which will return that same net revenue to gas owners. Because the OSTER universally applies to the whole project, there is little to no net revenue affect by setting the rate or return at either a high or low value.

The Producers will be asked to become capital partners in proportion to their proven reserves thereby keeping the risk and reward equitable between them. Interest on capital invested will accrue and compound from the beginning. Capital invested at the beginning has a higher risk and will receive a commensurately higher interest credit. As the project continues, risk reduces and so will the interest credit. Regardless of who the capital partner is, once a commitment to fund a percentage of the Project is made, failure to keep up with the funding through the end of the Project will be considered abandonment of their investment to the Project. This portion of the project will be available for use by the Project to the maximum benefit of the Project in keeping with the OSTER.

Once the Project is complete, the Capital Partner Producers have rights to be the anchor shippers with proportionate rights to “producers” portion of OSTER initial capacity (in proportion to their contribution to the capital costs of the Project). The non-producer portion of the proven capacity will be distributed during the initial open season.

By the end of the project, the Capital Partner Producers have accepted the risks associated with building the project. A firm transportation commitment is the only way a Producer will benefit from their capital investment so it follows that they should become an anchor shipper. If they refuse to ship, the State of Alaska may exercise their rights to “re-lease” the gas fields.

#### IF THE PRODUCERS ARE NOT THE CAPITAL PARTNERS:

The requested return on investment will be based on the Wall Street Journal Prime Rate plus a percentage necessary to attract investors. Through a negotiation process, AENERGIA will solicit for the Capital Partner for the Project. We believe the negotiated rates for ROI and repayment will be very attractive to potential Capital Partners because its stability is guaranteed by the proceeds from the sale of natural gas (at the presently escalating prices); by the FERC license; and by the underwriting of any Federal loan guarantees. AENERGIA will negotiate with potential Capital Partners for the maximum benefit of the Project and the State of Alaska. Final decision will reside in the Project Nexus.

The requested FERC license rates will be reflected in the tariffs which the Producers will, of course, predominantly pay. The existence and possible exercise of this process will equitize the Market Risk into the net revenue of the gas. We believe the Producers will want to become the Capital Partners to collect the higher percentage.

Once the Project is complete, Producers have rights to the initial capacity in proportion to their reserves. Open seasons will be held as capacity becomes available. Most of the risks have been removed from the marketing of the gas. A firm transportation commitment is the only way a Producer will benefit from the capital investment so it is a minor step to become shipper. If they refuse to ship, the State of Alaska may exercise their rights to “re-lease” the gas fields.

#### OPEN SEASON

Open season will be held periodically in accordance with 18CFR157 to assign and reassign capacity rights. Capacity rights are not transferable. Unused capacity and variance in actual capacity from proven

capacity will be shared equally by all capacity right holders in proportion to the capacity reserved by their existing right until the next Open Season. Details of this sharing will be worked out within NSGC. Proven capacity is defined as the average capacity over a given period prior to an open season that probabilistically is expected to be maintained by ANGL.

Open seasons will be held as often as proven transport capacity increases more than a specified percentage and in keeping with requirements of AS 43.90.130(6).. Prior to an open season, if the proven capacity increases, the capital partners may raise their capacity rights up to the OSTER capacity in proportion to their contribution to the capital costs of the Project. If the proven capacity decreases, the capital partners must lower their capacity rights to the OSTER capacity in proportion to their contribution to the capital costs of the Project. At all times, the OSTER will be maintained. Existing shippers may not use this process to exclude new shippers from use of ANGL.

Open season capacity increases will be based on total reserves. In order to be considered for a capacity right, the Producer must demonstrate the capability to deliver natural gas capacity. GTP modifications to handle the capacity and the treatment of the gas will be reimbursed by the Producer for which the GTP is being modified.

Disposal fees will be prorated to the source of the disposed fractions.

In the event of an expansion program for transport capacity beyond the design transport capacity, the increased capacity will be distributed through an open season. If the Producers are the capital partners, their irrevocable rights to the initial capacity remain unchanged unless voluntarily relinquished.

The OSTER is designed around simplicity and transparency. In keeping with this, the Project shall as much as possible not have debt either in accounts receivable or accounts payable. The books shall be closed weekly with all debts paid (except for instances requiring further verification), and the books will be made available for audits.

Capitalization payments will be calculated by dividing the total debt by the number of payments over the life of the project or loan plus the interest over the payment period. This will provide for a declining payment so that the repayment impact on tariffs will decrease as well production matures.

### **2.2.3.5 Rate Structure and Supporting Information**

Many of these issues are dealt with in related sections and on the attached spreadsheet. Some issues will have to be resolved in the Project Nexus as part of the Nexus process.

ÆNERGIA commits to a capital structure with not less than 70% debt in initial design.

### **2.2.3.6 Alternative Ratemaking Methods and Incentives**

The intent of the binding charter of “North Slope Gas Cooperative” and ANGL is to form near non-profit or zero-profit service organizations (as per section 3.2.3) where all costs and profits are distributed equitably and transparently to the gas owners as per the OSTER. As such, there should be no need for negotiated or recourse rates.

The tariffs for the non-public sector equity holders will be equitably adjusted according to ownership to pass on the tax advantage of the depreciation of the *Project*.



### 2.2.3.7 Negotiated Rates

There should be no need for negotiated rates. See section 2.2.3.6

### 2.2.3.8 Anchor Shipper Incentive Rates and Commitments to Rates for Expansion Capacity

There is no need for incentive rates as all tariffs are based on the cost of shipping.

### 2.2.3.9 Commitment to In-State Service

As per AS 43.90.130 (12) AENERGIA commits to a minimum of five delivery points of natural gas in the state.

As per AS 43.90.130 (13) AENERGIA commits to offer firm transportation service to delivery points in this state as part of the tariff regardless of whether any shippers bid successfully in a binding open season for firm transportation delivery service to delivery points in the state.

As per AS 43.90.130 (13) AENERGIA commits to offer distance-sensitive rates to delivery points in the state consistent with 18 C.F.R. § 157.34 (c)(8).

The FEED shall determine the most cost-effective locations for the delivery points according to the “maximization of the *“benefits to the people of the state from the development of oil and gas resources in the state”* and encouragement of persons to ship gas *“to markets in this state or elsewhere;”* (AS 43.90.010 (2) and (3)). Accordingly, providing Alaskans access to the state’s natural gas resources on reasonable terms is an important goal of the state in the award of any AGIA License” and in conjunction with the Project Nexus.

It is likely that markets and infrastructure to use natural gas in the state may not be fully developed by the time the first binding open season is closed or even by the time that the pipeline is designed and constructed. However, AENERGIA is committed to Alaskans having continued access to these resources and will carry this commitment into the design of ANGL and “North Slope Gas Cooperative”. AENERGIA commits to a design that gives Alaskans access to capacity as future market and infrastructure developments occur. The pipeline may be fully contracted as these developments occur and capacity to serve Alaska’s in-state needs may have to be added in the future. AENERGIA commits to maintaining the opportunity to obtain pipeline capacity and that the rates for deliveries within the state be as low as possible in order to facilitate the use of Alaska’s gas by consumers in Alaska.

### 2.2.3.10 Rate Treatment of State’s Reimbursement

Per AS 43.90.130(18), AENERGIA commits *“that the state reimbursement received by a licensee may not be included in the applicant’s rate base, and shall be used as a credit against licensee’s cost of service;”*.

AENERGIA commits to deduct the state reimbursement from the debt and equity base proportionately (i.e., pro rata).

### **2.2.3.11 Minimizing the Effect of Cost Overruns on Rates**

Cost overruns are unnecessary avoidable costs incurred while designing and constructing the *Project*. The benchmark is the estimate of the completion needs extrapolated from similar conditions on similar projects and most recent assessment of current conditions. The benchmark is established as a budget.

Fundamental to this plan is the lack of benefit derived from running up the costs. Neither AENERGIA nor any of the involved parties derive benefit from running up costs. If cost overruns occur, they will be borne directly by the Capital Partner.

### **2.2.3.12 Plan for North Slope Gas Treatment Plant**

The Project shall include a North Slope Gas Treatment Plant (GTP) treat and deliver gas to the mainline. The GTP shall remove certain Impurities as necessary and return them for injection or other disposition, including enhanced recovery; and compress and chill the treated Gas to meet Mainline specifications. Cost of construction will be borne by the Capital Partner.

AENERGIA commits construct the GTP as cost-effectively as possible so as to keep tariffs to a minimum.

AENERGIA commits to value previously used assets that are part of the gas treatment plant at net book value.

### **2.2.3.13 Plan for Canadian Segment**

For the Canadian segment, AENERGIA plans to “piggy-back” on already existing treaty and relationship of stakeholders, consultants, or contractors (as part of the value they bring to the Project) that will bring the Canadian segment in line with the Alaskan Operations. It is anticipated that there will be a supplemental tariff, based on the cost to ship and/or store via the Canadian assets, which will be paid by the shipper company, NSGC.

### **2.2.3.14 Plan for LNG Project**

The Project does not include LNG facilities but will accommodate independent LNG ancillary projects as described in section 2.1.5.

### **2.2.3.15 Plan for Gas Processing and NGL Markets**

The plan for Gas Processing and NGL markets is a result of the FEED. Many of these issues will be resolved during that time and through the Project Nexus process.

## **2.2.4 Regulatory Plan**

### **2.2.4.1 Regulatory Approvals**

Anticipated regulatory to be coordinated by AENERGIA in Alaska include a FERC license from the Federal Government to build and operate a gas pipeline and approval of RCA at the State level. Since the Nexus will be where the actual commitment will be made, at this point, some regulatory issues are unknowable. The Canadian NEB will require license for operations, similar to FERC, but such approvals are to be sought by the Stakeholder, Consultant, or Contractor which can best provide this value.

#### **2.2.4.2 Rights-of-Way**

Identifying and obtaining of Rights-of-Way is part of the FEED and part of negotiations with Canadian partners once a license is issued.

#### **2.2.4.3 Commitments for FERC-Certificated Project**

Per AS 43.90.130(3), to the extent the proposed project will be subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC):

1. AENERGIA commits to conclude a binding open season that is consistent with 18 C.F.R. Part 157, Subchapter B and 18 C.F.R. Sections 157.30-157.39 by a date certain which must be set forth in the Application and must be no later than 36 months after the date the License is issued;
2. AENERGIA commits to apply for FERC approval to use the pre-filing procedures set out in 18 C.F.R. Section 157.21 by a date certain which must be set forth in the Application; and
3. AENERGIA commits to apply for a FERC Certificate of Public Convenience and Necessity to authorize the construction and operation of the proposed project by a date certain that must be set forth in the Application.

The dates certain are consistent with the project schedules.

#### **2.2.4.4 Commitments for RCA Certificated Project**

Per AS 43.90.130(4), AENERGIA commits to:

- (A) conclude within 36 months after the date the license is issued, a binding open season that is consistent with the requirements of AS 42.06; and
- (B) apply for a certificate of public convenience and necessity to authorize the construction and operation of the proposed project within 6 months after the binding open season;”.

#### **2.2.4.5 Commitments for a Canadian Pipeline Project**

The AENERGIA includes a pipeline that enters into Canada and commits to our plan of timely pursuit of any necessary Canadian certificates of public convenience and necessity or other comparable authorizations.

## **2.2.5 Local Project Headquarters Plan**

Per AS 43.90.130(14), AENERGIA commits to *“establish a local headquarters in this state for the proposed project,”* during all phases of the design, construction and start-up. The headquarters is intended to house the CMM staff and subcontractors directly involved in directing the project actions in Alaska.

## **2.3 Execution Plan**

### **2.3.1 Project Execution Plan**

AENERGIA plans to use strict CMM protocols to manage capital costs with reporting and oversight from the Project Nexus.

### **2.3.2 Managing Capital Costs**

AENERGIA plans to use strict CMM protocols to manage capital costs with reporting and oversight from the Project Nexus.

### **2.3.3 Project Labor Agreement**

Per AS 43.90.130(17), AENERGIA commits *“to negotiate, before construction, a project labor agreement to the maximum extent permitted by law; in this paragraph, ‘project labor agreement’ means a comprehensive collective bargaining agreement between the licensee or its agent and the appropriate labor representatives to ensure expedited construction with labor stability for the project by qualified residents of the state;”*.

The project labor agreement may include provisions requiring, to the maximum extent permitted by law, contractors and subcontractors, of all tiers, to recruit and hire qualified Alaska residents from throughout Alaska, including apprentices and other persons that have received or are receiving training through state or federally funded programs.

### **2.3.4 Alaska Hire**

Per AS 43.90.130(15), AENERGIA commits *“to the maximum extent permitted by law, to:*

- (a) hire qualified residents from throughout the state for management, engineering, construction, operations, maintenance, and other positions on the proposed project;*
- (b) contract with businesses located in the state;*
- (c) establish hiring facilities or use existing hiring facilities in the state; and*
- (d) use, as far as is practicable, the job centers and associated services operated by the Department of Labor and Workforce Development and an Internet-based labor exchange system operated by the state;”*.

## **2.4 Operations Plan**

## 2.4.1 Expansion

### 2.4.1.1 Market Assessment

Per AS 43.90.130(5), AENERGIA commits *“that after the first binding open season, AENERGIA will assess the market demand for additional pipeline capacity at least every two years through public nonbinding solicitations or similar means;”*.

(1) AENERGIA commits that all nonbinding solicitations of interest conducted pursuant to the License and for purposes of assessment of potential market demand for expansion capacity will:

- (a) Be conducted at least every two years after the conclusion of the first binding open season
- (b) Be public and provide at least 30 days’ prior public notice of each nonbinding solicitation of interest through methods reasonably calculated simultaneously to notify all interested parties, including postings on internet web sites, press release and direct mail notification and other advertising.
- (c) Set forth the next reasonable engineering increment of capacity, consistent with AS 43.90.130(6) (B)
- (d) Contain Licensee’s good faith estimate of recourse rates for the next reasonable engineering increment of expansion capacity as well as a larger expansion utilizing rolled-in rates to the levels required by AS 43.90.130(7).
- (e) Set forth a good faith estimate of how long it will take to place into service the next reasonable engineering increment of capacity.
- (f) Contain provisions that permit creditworthy prospective shippers to make binding commitments for expansion capacity in a binding open season to be conducted promptly by the Licensee subsequent to the nonbinding solicitation of interest.
- (g) Commit the Licensee to promptly and diligently pursue a binding open season for expansion capacity, conducted in a manner consistent with the requirements of 18 C.F.R. §§ 157.30-157.39, to the extent that the expressions of interest demonstrate a market demand on commercially reasonable terms by creditworthy shippers that equals or exceeds the next reasonable engineering increment of capacity, as defined in AS 43.90.130 (6) (B)

(2) AENERGIA commits that in a binding open season conducted after the nonbinding solicitation of interest AENERGIA will not:

- (a) require a prospective shipper to agree to any particular rate (other than the recourse rate), or
- (b) require an existing shipper to pay any rate for a capacity expansion prior to the date that new expansion facilities go into service.

### 2.4.1.2 Expansion Terms

AENERGIA commits to expand the proposed project in reasonable engineering increments and on commercially reasonable terms that encourage exploration and development of gas resources in this state; in this paragraph,

(A) "commercially reasonable terms" means that, subject to the provisions of (7) of this section, revenue from transportation contracts covers the cost of the expansion, including increased fuel costs and a reasonable return on capital as authorized by the Federal Energy Regulatory Commission or the Regulatory Commission of Alaska, as applicable, and there is no impairment of the proposed project's ability to recover the costs of existing facilities;

(B) "reasonable engineering increments" means the amount of additional capacity that could be added by compression or a pipe addition using a compressor size or pipe size, as applicable, that is substantially similar to the original compressor size and pipe size;"

AENERGIA commits to promptly and diligently pursue all regulatory approvals upon the receipt of acceptable binding commitments for expansion capacity, and commits to promptly and diligently proceed to expand the project at a reasonable engineering increment sufficient to satisfy all demand for expansion capacity so long as:

(a) additional revenue, if any, from existing transportation contracts on the Project, plus the projected revenue from binding expansion capacity commitments, cover the costs of the expansion (including fuel costs and a reasonable return on capital as authorized by FERC, the NEB, or the RCA, as applicable); and

(b) Applicant's ability to recover the costs of existing facilities is not impaired.

### **2.4.1.3 Rolled-in Rates**

AENERGIA commits to propose and support the recovery of mainline capacity expansion costs, including fuel costs, through rolled-in rates consistent with all of the provisions of AS 43.90.130(7) of the Act.

To ensure that as many expansion costs as possible are recovered through rolled-in rates, AENERGIA commits to propose and support the assignment of expansion costs to all firm billing determinants, including those related to negotiated rate contracts, and commit to propose and support rates that will bear the same percentage change to all rates consistent with AS 43.90.130(7), including any term-differentiated rates.

### **2.4.1.4 General Expansion Provisions**

AENERGIA commits to "promptly and diligently pursue" binding open seasons, regulatory approvals and expansions and shall act in a manner that is commercially reasonable in the interstate gas pipeline industry in the U.S. with respect to timing and execution of relevant actions.

A shipper is deemed creditworthy if it satisfies the creditworthiness standards for the project's applicable tariffs. For expressions of interest and expansions undertaken prior to regulatory approval of such standards, creditworthiness shall be determined according to the standards the Licensee applies in its initial binding open season.

AENERGIA commits to file, as part of its tariff, its determination of the reasonable engineering increment of capacity based on the design of the project prior to project sanction and each time the design capacity of



the project changes due to modifications of the facilities or operation of the pipeline (other than normal day-to-day changes in pipeline operations).

For purposes of determining the reasonable engineering increment of capacity that can be added by the addition of pipe (commonly referred to as “looping”) the Licensee shall base its calculations on: (1) the addition of a full valve section based on the original pipeline mainline valve locations; and (2) pipe diameter that would be required were a full loop of the pipeline to be undertaken.

## **2.5 Project Cost Estimate**

### **2.5.1 Cost Estimate for Development Phase**

ÆNERGIA estimates the development phase to be on the order of 10% of the total Project cost or about \$3,000,000,000 as follows:

|   |                 |
|---|-----------------|
| Front End Engineering Design:                                 | \$1,000,000,000 |
| Environmental Impact Studies and Assessments                  | \$ 500,000,000  |
| Right-of-Way Determination and Negotiations                   | \$ 200,000,000  |
| Regulatory and Permitting Activities                          | \$1,500,000,000 |
| Project Management for all the work in the Development Phase: | \$ 300,000,000  |

### **2.5.2 Cost Estimate For Execution Phase**

ÆNERGIA estimates the execution phase to be on the order of 10% of the total Project cost or about 27,000,000,000.

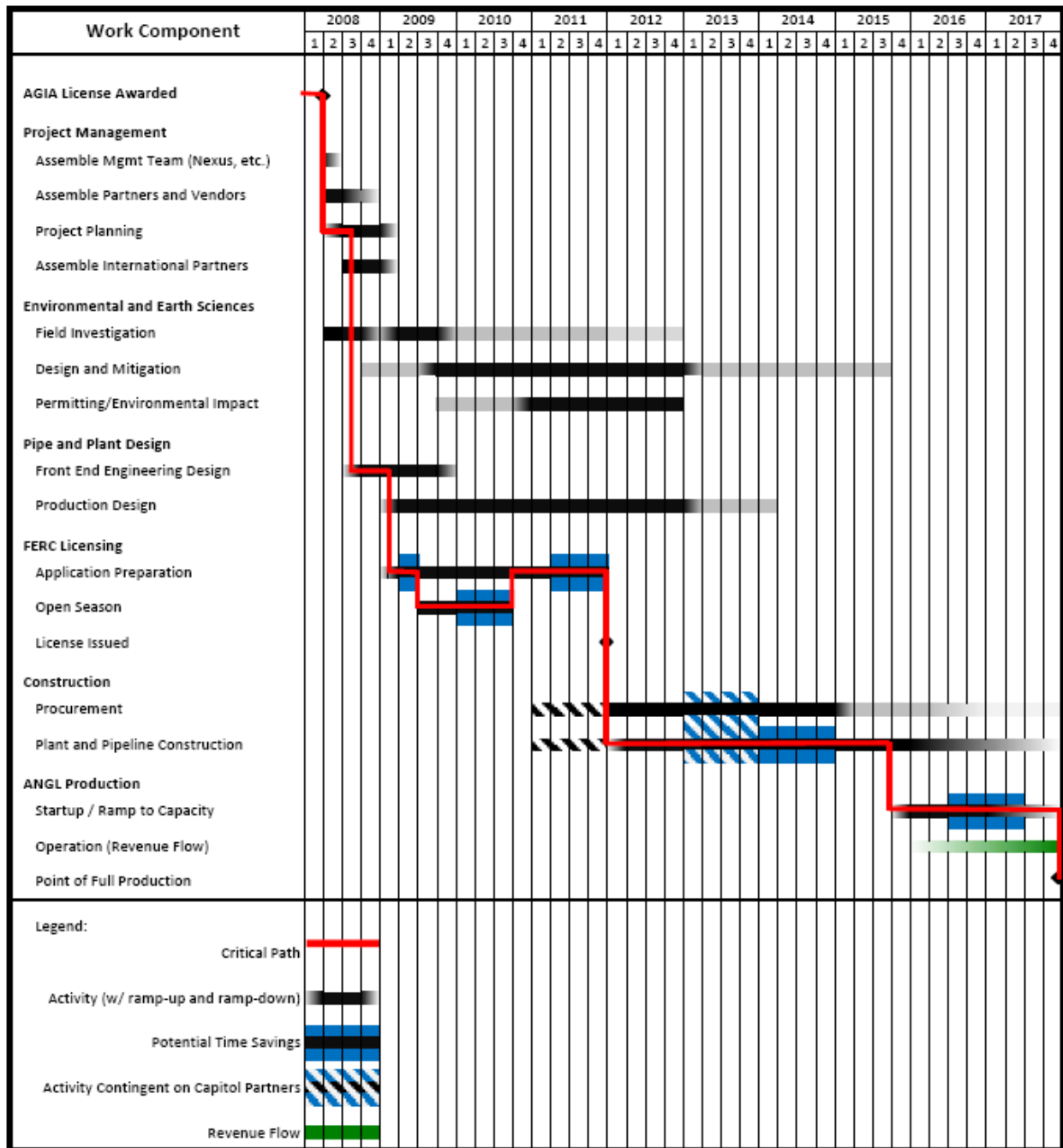
|   |                  |
|---|------------------|
| • Engineering Design:   | \$ 3,000,000,000 |
| • Materials   | \$15,000,000,000 |
| • Construction  | \$ 5,000,000,000 |
| • Other   | \$ 4,000,000,000 |
| • Project Management for all the work in the Development Phase: | \$ 1,000,000,000 |

## **2.6 Project Schedule**

In the following discussions, the major steps are outlined followed by a Gantt chart showing an approximation of the critical path. Showing the critical path is difficult because of the compression of the tasks. Much of the timing of events will be based on the data gathered in the first year and the outcome of the FEED.

It is fool hearted to try to manage the design and construction of this massive project by an estimated timeline developed before all the elements of design and process have been determined. It has been the intent of recent laws to expedite the permitting process but there are no guarantees that the process will function as intended. The timeline attempts to show where it is expected that time could be saved is established processes functioned as intended.





## 2.6.1 Schedule for Development Phase

See section 2.6

## 2.6.2 Schedule for Execution Phase

See section 2.6

## 2.7 Risk Assessment and Mitigation

Project Risks fall in these areas:

- Completion Risk
- Cost Overrun Risk
- Firm Transportation Risk
- Market Price Risk
- Political
- Tax
- Regulatory Risk
- Force Majeure Risk
- Canadian Risk

In order for the Project risks to be best mitigated, the risks must be borne by the resource owners. AENERGIA has created a plan to allow for this but has not tied the success of the plan to this. Equitization of risk is more expensive if non-resource owners provide this service.

### Completion Risk

AENERGIA has mitigated this risk as much as is possible by:

- Creating the CMM team who takes a fiduciary duty to the objective of project completion.
- Creating a team who is able, without bias or hidden corporate loyalties, seek and employ the best of breed in engineering, earth sciences, environmental, litigation, etc.
- Not tying the project solely to a Capital Partner.
- Offering rewards for the Producers who will step to as a Capital Partner and by failing to benefit Capital Partner who fail to fulfill their commitment to fund the project

### Cost Overrun Risk

AENERGIA has mitigated this risk as much as is possible by:

- Creating the CMM team who takes a fiduciary duty to the objective of project completion as cost-effectively as possible.
- Providing increased profit for reduction of costs and by removing all benefit from cost overruns.

### Firm Transportation Risk

AENERGIA has mitigated this risk as much as is possible by:

- Providing the tariffs at cost and by keeping the cost of design and construction as low as possible thereby creating an environment where the gas can be marketed for maximum profit.
- Providing financial incentives and depreciation to encourage the Producers to become the Capital Partners.
- Giving control of ANGL to the shippers.

### Market Price (Economic) Risk

AENERGIA has mitigated this risk as much as is possible by providing the tariffs at cost and by keeping the cost of design and construction as low as possible. AENERGIA cannot control market forces but low tariffs can help insulate against this risk

### Political Risk

ÆNERGIA has mitigated political risk as much as is possible by:

- Creating the Project Nexus to insure that all stakes are well represented in the setting of Project objectives. If all stakes are handled appropriately, there will be no need for political leaders to intervene on behalf of the stake.
- Creating a Liaison Office and Information Office that communicates directly with ÆNERGIA top level management. This configuration communicates the importance of clean, transparent, high-level communication and interface with the public and public leaders.

### Tax Risk

ÆNERGIA has mitigated tax risk as much as is possible by creating a system where the State of Alaska's fair share is taken as royalty in kind. As the price of gas increases, the State of Alaska automatically gets a larger revenue stream reducing the need to intervene with as is the case where there is a fixed asset tax or PPT tax.

### Regulatory Risk

ÆNERGIA has mitigated the regulatory risk as much as is possible by:

- Creating the Project Nexus to insure that all regulation is included in the Project objectives.
- Creating a Liaison Office that communicates directly with ÆNERGIA top level management. Under CMM, there is within the Liaison Office a position for regulators from multiple jurisdictions to occupy. This configuration gives regulators a clear and transparent process for providing input and receiving intel as the Project progresses
- Creating a position on the CMM team for representatives of organizations

### Force Majeure Risk

ÆNERGIA has mitigated the regulatory risk as much as is possible by CMM project management. The root of CMM is emergency management which thrives during times of force majeure.

### Canadian Risk

ÆNERGIA has mitigated the regulatory risk as much as is possible by piggybacking on the prior negotiations of the Producers and Natural Gas Consortium

## **2.8 Financial Plan**

### **2.8.1 Description of Applicant and Participating Entities**

See section 2.2.2.4 and 1.1.1

### **2.8.2 Demonstration of Financial Resources**

Owing to the nature of the AENERGIA plan, we should be “looked-through” to the other stakeholders, particularly the capital stakeholder for a demonstration of financial strength.

## **2.9 Performance History and Project Capability**

Owing to the nature of AENERGIA, we should be “looked-through” to past performance of the individual parties that make up the AENERGIA team. Bill Burkhard and Andy Taber in particular have long histories of successful completion of large public works projects, on time and within budget. Other stakeholders such as the Producers are clearly capable of dealing with all aspects of large projects.

AENERGIA considers sound business ethics fundamental to successful mitigation of business risk. Each year, for the last 15-years, when Taber Consultants teaches a class on geotechnical exploration to the geotechnical graduate students from the University of California at Berkeley and Davis, Mr. Taber teaches a section on the importance of integrity in providing engineering services.

### **2.9.1 History of Compliance with Safety, Health & Environmental Requirements**

Owing to the nature of the AENERGIA team, we should probably be “looked-through” to the other stakeholders in this arena as well; however, we are adamantly in support of Safety, Health and Environmental Requirements. It is not only the proper way to honor those you are responsible to and for, but it is just plain good business to pay attention to the welfare of others.

### **2.9.2 Capability to Follow a Detailed Work Plan and Schedule**

Owing to the nature of the AENERGIA plan, we should again probably be “looked-through” to the other stakeholders, particularly the producer stakeholders.

### **2.9.3 Capability to Operate Within a Cost Estimate**

Owing to the nature of the AENERGIA plan, we are proud of the track records of our principal partners, but should probably again be “looked-through” to the other stakeholders, and most particularly to the consultants and contractors that will be approved by the Nexus.

### **2.9.4 Integrity and Good Business Ethics**

Both Mr. Burkhard and Mr. Taber have a long history of good business ethics and integrity and plan to manage the project with this same character.

### **2.9.5 Other Relevant Factors**

## 2.10 Project Viability

### 2.10.1 Economic Viability

See attached chart.

### 2.10.2 Technical Viability

The FEED is a complex iterative balancing act between the interrelated parameters of steel design and time-sensitive earth science constraints imposed by the geographical alignment. Many of these parameters cannot be fixed without a FEED, so for the purposes of this application, broad generally accepted assumptions and commitments will be used. The exact design parameters and commitments of the project will be addressed in the FEED and are expected to vary some from the values stated herein.

Gas composition is highly constrained by the cold ambient environment of the Alaskan alignment. At the typical operating pressures, the Alaskan ambient temperature is below the dew point of ethane and other higher order hydrocarbons. If the mole fractions of the higher order hydrocarbons are too high, the hydrocarbons will condense, pool, and form slugs of liquid which will reduce the ability of the pipeline to carry product.

The project decisions will be most likely constrained by cost, volume, and on-site availability of steel. Preliminary cost estimates show that high strength steel, possibly X-100 steel, is needed to reduce steel quantity and address shipping and construction constraints. The availability of X-100 steel in the required quantities, diameter, roughness, and thickness is unclear but will be addressed when commitments to designs are made.

The use of Composite Reinforced Line Pipe (CRLP) technology will also be evaluated during the FEED. CRLP can reduce the costs by reducing the steel requirements and wrapping and insulating requirements. Since CRPL has a lower modulus of elasticity, issues like ground constraints and frost-bulb fixity will be addressed and will determine optimum operating temperature, insulation, and pressurization schedule.

Assuming the arctic environmental constraints, the operating temperature will most likely vary by reach but always be near freezing. Preliminary estimates of the most cost-effective design have shown the optimum pressure to be on the order of 3000 psi at the compressor station to take advantage of the maximum efficiency in compression of dense phase natural gas (i.e. minimum compressibility factor  $Z = 0.64-0.68$ ;  $PV=nZRT$ ).

The design will most likely accommodate some quantities of hydrocarbons with more than one carbon such as ethane, propane, pentane, butane, iso-propane, and possibly higher order hydrocarbons. Since these gasses will be sub-critical, they will have a tendency to condense and form slugs which will have to be mitigated. The FEED will determine the most cost-effective composition of the mainline gas mixture.

The optimum startup capacity of the pipeline is approximately 4+ BCFD. A 48"-52" pipe is likely the most efficient size to carry this quantity with an option to carry a capacity of approximately 5+ BCFD by further compression.

Within the limits of erosion velocity, horsepower requirements are based primarily on the roughness of the presumed available X-100 steel pipe and the heat absorption along a particular alignment. Experience has shown that the optimum frictional head loss should be in the range of 3.5 – 5.85 psi/mile. With these assumptions, compressor horsepower for the Alaska portion of the alignment should be on the order of 200000 hp to treat the product, to raise the product to 3000 psi and chill it during the summer months. About 70000 -10000 hp to needed overcome head loss while moving the product across Alaska and

recompress the product along the way. These values will change with the season and have an interrelationship with pipe, insulation, and backfill design.

ÆNERGIA commits to a design that will incorporate “practices for controlling carbon emissions from natural gas systems as established by the United States Environmental Protection Agency,” per AS 43.90.130(2)(D).

The natural gas and NGL will be delivered at the Canadian border at a fixed design pressure and temperature which are estimated to be near 3000 psi and 32°F. A full set of instrumentation will be provided to record and document the characteristics of product at both ends of the pipeline as well as at every tap where product is consumed or delivered.

“Plant and Pipeline” and groups will have significant technical hurdles to overcome. Because a technically viable design was established on the ANG line in the 70’s and 80’s in part by some of the ÆNERGIA team members, design of ANGL will inherit some of that same design but be scaled up. The volumetric size of this design will be many-fold greater and have a much higher degree of care for the environment through which it travels. The socio-political environment has also changed such that much greater care is needed to protect the groups which will be impacted. Requirements for protection from vandalism and terrorism have also greatly increased.

Preliminary estimates of field depletion rates, project life requirements, volumetric flow rates, logistical and supply limitations, etc. have pushed the preliminary design concept toward using exotic steels such as X-80 or X-100 with diameters and wall thicknesses that are currently unavailable in volumes that are very high but achievable.

“Earth Sciences and Environmental” will also have their challenges. Because of the destructive potential of the failure of ANGL, the pipeline may not be able to share Atigun Pass with the TAPS Pipeline. ANGL may have to traverse the pass just east of Atigun or traverse the Brooks Range through a tunnel. (The geologist who did the subsurface mapping of the Atigun Pass area during the ANG attempt is available to the ÆNERGIA team.)

To protect ANGL from vandalism and terrorism, it may have to traverse under the Yukon River. This technology has greatly increased since the ANG attempt.

Frost heave on a larger pipe is a significantly greater problem but the capacity to model the thermal régime has also greatly improved and it supported by the relatively new techniques for the aerial electro-magnetic conductance mapping of the permafrost along the alignment recently completed by State. (The original thermal modeling group from the ANG attempt is available to the ÆNERGIA team.)

These are all hurdles but each is conquerable. Hurdles in the “Plant and Pipeline” arena are for the most part design, constructability, and supply at a reasonable cost. Hurdles in the “Earth Sciences and Environmental” arena can be mitigated but the greatest cost savings will be in problem and litigation avoidance not in mitigation. It ÆNERGIA’s intention to defuse liability at every juncture and prepare for legal defense though thorough documentation and CMM protocols.

## **2.11 Proposed Reimbursement**

ÆNERGIA estimates the total reimbursement for qualified expenditures for:

- pursuing firm transportation commitments in a binding open season: \$50,000,000
- securing financing for the project: \$50,000,000



- obtaining a certificate of public convenience and necessity from the Federal Energy Regulatory Commission or the Regulatory Commission of Alaska, as appropriate: \$300,000,000
- satisfying a requirement of an agency with jurisdiction over the project: \$200,000,000

totaling \$600,000,000. Of this amount AENERGIA estimates a request a reimbursement for 50% of this amount or \$300,000,000 at a rate of \$100,000,000 per year for three years.



### 3 Conclusion

Seven thoughts of why AENERGIA is best choice:

1. CMM is the most powerful tool for
  - a. Achieving Objective
  - b. Efficiency in applying resources
  - c. No 15% markups
2. Nexus it the correct application of authority to complete the “must-haves” of Stakeholders.
3. Lowest cost financing possible maximizing the revenue generation back to the resource owners
4. Royalty-in-kind removes “incentive for inefficiency”
5. Mechanisms are in place to choose the best experts in the field. We have many of the experts from the previous attempt in place.
6. Task-order assignment approach to consultants and contractors adds control and reduces markups.
7. It is a plan built around establishing equity first so all stakeholders are going in the same direction.

## Cash Flow Estimates for the First 20 Years

| Year:                                    | 1 through 20        |                        |                     |
|--|---------------------|------------------------|---------------------|
| Market<br>Natural<br>Gas Price<br>/MMBTU | Alaska<br>(\$M/day) | Producers<br>(\$M/day) | GSS/TC<br>(\$M/day) |
| 2.50                                     | (1.45)              | (4.28)                 | (0.06)              |
| 3.00                                     | (0.91)              | (2.71)                 | (0.04)              |
| 3.50                                     | (0.38)              | (1.13)                 | (0.02)              |
| 4.00                                     | 0.15                | 0.44                   | 0.01                |
| 4.50                                     | 0.68                | 2.01                   | 0.03                |
| 5.00                                     | 1.21                | 3.59                   | 0.05                |
| 5.50                                     | 1.74                | 5.16                   | 0.07                |
| 6.00                                     | 2.28                | 6.73                   | 0.09                |
| 6.50                                     | 2.81                | 8.31                   | 0.11                |
| 7.00                                     | 3.34                | 9.88                   | 0.13                |
| 7.50                                     | 3.87                | 11.46                  | 0.15                |
| 8.00                                     | 4.40                | 13.03                  | 0.18                |
| 8.50                                     | 4.93                | 14.60                  | 0.20                |
| 9.00                                     | 5.46                | 16.18                  | 0.22                |
| 9.50                                     | 6.00                | 17.75                  | 0.24                |
| 10.00                                    | 6.53                | 19.32                  | 0.26                |
| 10.50                                    | 7.06                | 20.90                  | 0.28                |
| 11.00                                    | 7.59                | 22.47                  | 0.30                |
| 11.50                                    | 8.12                | 24.04                  | 0.32                |
| 12.00                                    | 8.65                | 25.62                  | 0.35                |
| 12.50                                    | 9.19                | 27.19                  | 0.37                |
| 13.00                                    | 9.72                | 28.76                  | 0.39                |
| 13.50                                    | 10.25               | 30.34                  | 0.41                |
| 14.00                                    | 10.78               | 31.91                  | 0.43                |
| 14.50                                    | 11.31               | 33.48                  | 0.45                |
| 15.00                                    | 11.84               | 35.06                  | 0.47                |
| 15.50                                    | 12.38               | 36.63                  | 0.50                |
| 16.00                                    | 12.91               | 38.20                  | 0.52                |
| 16.50                                    | 13.44               | 39.78                  | 0.54                |
| 17.00                                    | 13.97               | 41.35                  | 0.56                |
| 17.50                                    | 14.50               | 42.93                  | 0.58                |
| 18.00                                    | 15.03               | 44.50                  | 0.60                |
| 18.50                                    | 15.56               | 46.07                  | 0.62                |
| 19.00                                    | 16.10               | 47.65                  | 0.64                |
| 19.50                                    | 16.63               | 49.22                  | 0.67                |
| 20.00                                    | 17.16               | 50.79                  | 0.69                |

# Input Parameters

|  |                       |
|--|-----------------------|
| Mainline Inflow                        | 4.30 Bcf / Day        |
| Energy Content                         | 1,035 BTU/cf          |
| Total Alaska Delivery                  | 10,000 MMBTU/Day      |
| Leakage & Venting                      | 1.0% of flow          |
| Escalation factor from 2001 (%)        | 20%                   |
| Assumed average cost of pipeline       | \$2.50 million / mile |
| Annual Plant O&M cost, less energy (%) | 15% of construction   |
| Annual Pipeline O&M cost (%)           | 1.25% of construction |
| Debt/Equity Ratio (% Debt)             | 70% debt              |
| Return on Capital Invested (ROCI)      | 0.00% Annual          |
| Loan Repayment Interest Rate           | 6.00% Annual          |
| Loan Life                              | 30 Years              |
| Canadian Tax / MMBTU                   | \$3.00 /MMBTU         |
| Gas Ownership (OSTER):                 |                       |
| Producers                              | 74.0%                 |
| Alaska                                 | 25.0%                 |
| AEnergia                               | 1.0%                  |
| Total                                  | 100.0%                |

| Milepost | Name             | 2001 Estimate of Design and Construction Cost in \$1,000 | Escalated Estimate of Design and Construction Cost in \$1,000 | Annual Cost of Plant O&M in \$1,000 | Annual Cost of Pipeline O&M in \$1,000 | ROCI in \$1000/day | Interest Payments in \$1000/day | BBTU /day | Leakage MMBTU /day | Local Flow Taxes /MMBTU | Cum. Cost /MMBTU | Daily Delivery & Usage BBTU /day | Delivery Tariff /MMBTU | Total Delivery Tariff (\$1,000) |
|----------|------------------|--|---|-------------------------------------|--|--------------------|---------------------------------|-----------|--------------------|-------------------------|------------------|----------------------------------|------------------------|---------------------------------|
| ANS      | ANS GTP          | 2,600,000  | 3,120,000   | 468,000                             |  | 0.00               | 431.38                          | 4,396     | 50                 |                         | 0.39             | 5.00                             |                        |                                 |
| 0.00     | Reach 1          | 162,775  | 195,330   |                                     | 2,442                                  | 0.00               | 27.01                           | 4,396     | 0                  |                         | 0.40             |                                  |                        |                                 |
| 65.11    | Pump Station A   | 500,000  | 600,000   | 90,000                              |  | 0.00               | 82.96                           | 4,384     | 10                 |                         | 0.47             | 1.04                             |                        |                                 |
|          | Reach 2          | 138,600  | 166,320   |                                     | 2,079                                  | 0.00               | 23.00                           | 4,384     | 0                  |                         | 0.48             |                                  |                        |                                 |
| 120.55   | Pump Station B   | 500,000  | 600,000   | 90,000                              |  | 0.00               | 82.96                           | 4,373     | 10                 |                         | 0.55             | 1.04                             |                        |                                 |
|          | Reach 3          | 584,550  | 701,460   |                                     | 8,768                                  | 0.00               | 96.99                           | 4,373     | 0                  |                         | 0.58             |                                  |                        |                                 |
| 354.37   | Delivery Point 1 | 1,000  | 1,200   | 180                                 |  | 0.00               | 0.17                            | 4,355     | 16                 |                         | 0.58             | 1.61                             | 0.58                   | \$0.94                          |
|          | Reach 4          | 3,825  | 4,590   |                                     | 57                                     | 0.00               | 0.63                            | 4,355     | 0                  |                         | 0.58             |                                  |                        |                                 |
| 355.90   | Pump Station C   | 500,000  | 600,000   | 90,000                              |  | 0.00               | 82.96                           | 4,344     | 10                 |                         | 0.66             | 1.03                             |                        |                                 |
|          | Reach 5          | 257,300  | 308,760   |                                     | 3,860                                  | 0.00               | 42.69                           | 4,344     | 0                  |                         | 0.67             |                                  |                        |                                 |
| 458.82   | Delivery Point 2 | 1,000  | 1,200   | 180                                 |  | 0.00               | 0.17                            | 4,326     | 16                 |                         | 0.67             | 1.61                             | 0.67                   | \$1.08                          |
|          | Reach 6          | 8,775  | 10,530  |                                     | 132                                    | 0.00               | 1.46                            | 4,326     | 0                  |                         | 0.67             |                                  |                        |                                 |
| 462.33   | Delivery Point 3 | 1,000  | 1,200   | 180                                 |  | 0.00               | 0.17                            | 4,308     | 16                 |                         | 0.67             | 1.61                             | 0.67                   | \$1.08                          |
|          | Reach 7          | 19,200   | 23,040  |                                     | 288                                    | 0.00               | 3.19                            | 4,308     | 0                  |                         | 0.67             |                                  |                        |                                 |
| 470.01   | Pump Station D   | 500,000  | 600,000   | 90,000                              |  | 0.00               | 82.96                           | 4,297     | 10                 |                         | 0.75             | 1.02                             |                        |                                 |
|          | Reach 8          | 77,525   | 93,030  |                                     | 1,163                                  | 0.00               | 12.86                           | 4,297     | 0                  |                         | 0.75             |                                  |                        |                                 |
| 501.02   | Delivery Point 4 | 0  | 0   | 180                                 |  | 0.00               | 0.00                            | 4,279     | 16                 |                         | 0.75             | 1.61                             | 0.75                   | \$1.21                          |
|          | Reach 9          | 147,425  | 176,910   |                                     | 2,211                                  | 0.00               | 24.46                           | 4,279     | 0                  |                         | 0.76             |                                  |                        |                                 |
| 559.99   | Delivery Point 5 | 1,000  | 1,200   | 180                                 |  | 0.00               | 0.17                            | 4,262     | 16                 |                         | 0.76             | 1.61                             | 0.76                   | \$1.22                          |
|          | Reach 10         | 258,775  | 310,530   |                                     | 3,882                                  | 0.00               | 42.93                           | 4,262     | 0                  |                         | 0.77             |                                  |                        |                                 |
| 663.50   | Delivery Point 6 | 1,000  | 1,200   | 180                                 |  | 0.00               | 0.17                            | 4,244     | 16                 |                         | 0.77             | 1.61                             | 0.77                   | \$1.24                          |
|          | Reach 11         | 195,050  | 234,060   |                                     | 2,926                                  | 0.00               | 32.36                           | 4,244     | 0                  |                         | 0.78             |                                  |                        |                                 |
| 741.52   | Alas-Can Plant   | 500,000  | 600,000   | 90,000                              |  | 0.00               | 82.96                           | 4,233     | 10                 |                         | 0.86             | 1.00                             |                        |                                 |
|          | Canadian Reach   |  |   |                                     |  | 0.00               | 0.00                            | 4,233     | 0                  | 3.00                    | 3.86             |                                  |                        |                                 |
| US       | US               |  |   |                                     |  |                    |                                 |           |                    |                         | 3.86             |                                  | 3.86                   | \$16,338.47                     |
|          | Total            | 6,958,800  | 8,350,560   | 919,080                             | 27,807                                 | 0                  | 1,155                           |           | 198                |                         |                  | 4,253                            |                        | \$16,345.24                     |

| Fixed Principal Payments | year | Beginning Balance | Payment | Debt Interest | Principal | Ending Balance | Beginning Total Equity | ROCI | P&I     |
|--------------------------|------|-------------------|---------|---------------|-----------|----------------|------------------------|------|---------|
|                          | 1    | 5,845,392         | 545,570 | 350,724       | 194,846   | 5,650,546      | 2,505,168              | 0    | 545,570 |
|                          | 2    | 5,650,546         | 533,879 | 339,033       | 194,846   | 5,455,699      | 2,700,014              | 0    | 533,879 |
|                          | 3    | 5,455,699         | 522,188 | 327,342       | 194,846   | 5,260,853      | 2,894,861              | 0    | 522,188 |
|                          | 4    | 5,260,853         | 510,498 | 315,651       | 194,846   | 5,066,006      | 3,089,707              | 0    | 510,498 |
|                          | 5    | 5,066,006         | 498,807 | 303,960       | 194,846   | 4,871,160      | 3,284,554              | 0    | 498,807 |
|                          | 6    | 4,871,160         | 487,116 | 292,270       | 194,846   | 4,676,314      | 3,479,400              | 0    | 487,116 |
|                          | 7    | 4,676,314         | 475,425 | 280,579       | 194,846   | 4,481,467      | 3,674,246              | 0    | 475,425 |
|                          | 8    | 4,481,467         | 463,734 | 268,888       | 194,846   | 4,286,621      | 3,869,093              | 0    | 463,734 |
|                          | 9    | 4,286,621         | 452,044 | 257,197       | 194,846   | 4,091,774      | 4,063,939              | 0    | 452,044 |
|                          | 10   | 4,091,774         | 440,353 | 245,506       | 194,846   | 3,896,928      | 4,258,786              | 0    | 440,353 |
|                          | 11   | 3,896,928         | 428,662 | 233,816       | 194,846   | 3,702,082      | 4,453,632              | 0    | 428,662 |
|                          | 12   | 3,702,082         | 416,971 | 222,125       | 194,846   | 3,507,235      | 4,648,478              | 0    | 416,971 |
|                          | 13   | 3,507,235         | 405,281 | 210,434       | 194,846   | 3,312,389      | 4,843,325              | 0    | 405,281 |
|                          | 14   | 3,312,389         | 393,590 | 198,743       | 194,846   | 3,117,542      | 5,038,171              | 0    | 393,590 |
|                          | 15   | 3,117,542         | 381,899 | 187,053       | 194,846   | 2,922,696      | 5,233,018              | 0    | 381,899 |
|                          | 16   | 2,922,696         | 370,208 | 175,362       | 194,846   | 2,727,850      | 5,427,864              | 0    | 370,208 |
|                          | 17   | 2,727,850         | 358,517 | 163,671       | 194,846   | 2,533,003      | 5,622,710              | 0    | 358,517 |
|                          | 18   | 2,533,003         | 346,827 | 151,980       | 194,846   | 2,338,157      | 5,817,557              | 0    | 346,827 |
|                          | 19   | 2,338,157         | 335,136 | 140,289       | 194,846   | 2,143,310      | 6,012,403              | 0    | 335,136 |
|                          | 20   | 2,143,310         | 323,445 | 128,599       | 194,846   | 1,948,464      | 6,207,250              | 0    | 323,445 |
|                          | 21   | 1,948,464         | 311,754 | 116,908       | 194,846   | 1,753,618      | 6,402,096              | 0    | 311,754 |
|                          | 22   | 1,753,618         | 300,063 | 105,217       | 194,846   | 1,558,771      | 6,596,942              | 0    | 300,063 |
|                          | 23   | 1,558,771         | 288,373 | 93,526        | 194,846   | 1,363,925      | 6,791,789              | 0    | 288,373 |
|                          | 24   | 1,363,925         | 276,682 | 81,835        | 194,846   | 1,169,078      | 6,986,635              | 0    | 276,682 |
|                          | 25   | 1,169,078         | 264,991 | 70,145        | 194,846   | 974,232        | 7,181,482              | 0    | 264,991 |
|                          | 26   | 974,232           | 253,300 | 58,454        | 194,846   | 779,386        | 7,376,328              | 0    | 253,300 |
|                          | 27   | 779,386           | 241,610 | 46,763        | 194,846   | 584,539        | 7,571,174              | 0    | 241,610 |
|                          | 28   | 584,539           | 229,919 | 35,072        | 194,846   | 389,693        | 7,766,021              | 0    | 229,919 |
|                          | 29   | 389,693           | 218,228 | 23,382        | 194,846   | 194,846        | 7,960,867              | 0    | 218,228 |
|                          | 30   | 194,846           | 213,151 | 11,691        | 701,460   | -506,614       | 8,155,714              | 0    | 213,151 |

|                  |  | Reach            |         |  |                                       | Feature |          |  |                                       |                         |
|------------------|--|------------------|---------|--|---------------------------------------|---------|----------|--|---------------------------------------|-------------------------|
|                  |  | Name             | Length  | Cost of Design and Construction in \$1,000 | Annual Cost of Maintenance in \$1,000 |         | Name     | Cost of Design and Construction in \$1,000 | Annual Cost of Maintenance in \$1,000 | Operation Cost per mmcf |
|                  |  | Milepost         |         |  |                                       |         |          |  |                                       |                         |
|                  |  | ANS GTP          | 0.00    |  |                                       |         | ANS GTP  | 2,600,000                                  | 5                                     |                         |
| Reach 1          |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R1               | 65.11   | 1,300,000                                  | 100                                   |         |          |  |                                       |                         |
|                  |  | Pump Station A   | 65.11   |  |                                       |         | PS A     | 425,000                                    | 1                                     |                         |
| Reach 2          |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R2               | 55.44   | 1,100,000                                  | 210                                   |         |          |  |                                       |                         |
|                  |  | Pump Station B   | 120.55  |  |                                       |         | PS B     | 380,000                                    | 1                                     |                         |
| Reach 3          |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R3               | 233.82  | 4,800,000                                  | 1,500                                 |         |          |  |                                       |                         |
| Delivery Point 1 |  |                  |         |  |                                       |         | DP 1     | 1,000                                      | 0                                     |                         |
| Reach 4          |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R4               | 1.53    | 100,000                                    | 10                                    |         |          |  |                                       |                         |
|                  |  | Pump Station C   | 355.90  |  |                                       |         | PS C     | 371,000                                    | 1                                     |                         |
| Reach 5          |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R5               | 102.92  | 2,000,000                                  | 1,000                                 |         |          |  |                                       |                         |
| Delivery Point 2 |  |                  |         |  |                                       |         | DP 2     | 1,000                                      | 0                                     |                         |
| Reach 6          |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R6               | 3.51    | 70,000                                     | 25                                    |         |          |  |                                       |                         |
| Delivery Point 3 |  |                  |         |  |                                       |         | DP 3     | 1,000                                      | 0                                     |                         |
| Reach 7          |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R7               | 7.68    | 140,000                                    | 50                                    |         |          |  |                                       |                         |
|                  |  | Pump Station D   | 470.01  |  |                                       |         | PC D     | 384,000                                    | 1                                     |                         |
| Reach 8          |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R8               | 31.01   | 600,000                                    | 250                                   |         |          |  |                                       |                         |
| Delivery Point 4 |  |                  |         |  |                                       |         | DP 4     | 0  | 0                                     |                         |
| Reach 9          |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R9               | 58.97   | 1,000,000                                  | 400                                   |         |          |  |                                       |                         |
| Delivery Point 5 |  |                  |         |  |                                       |         | DP 5     | 1,000                                      | 0                                     |                         |
| Reach 10         |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R10              | 103.51  | 2,000,000                                  | 800                                   |         |          |  |                                       |                         |
| Delivery Point 6 |  |                  |         |  |                                       |         | DP 6     | 1,000                                      | 0                                     |                         |
| Reach 11         |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | R11              | 78.02   | 1,500,000                                  | 700                                   |         |          |  |                                       |                         |
|                  |  | Alas-Can Station | 741.52  |  |                                       |         | Alas-Can | 410,000                                    | 2                                     |                         |
| Canadian Reach   |  |                  |         |  |                                       |         |          |  |                                       |                         |
|                  |  | Total            | 741.52  | 14,610,000                                 | 5,045                                 | 0.00    | 0.00     | 4,575,000                                  | 11                                    | 0                       |
|                  |  | Alas-Can Station | 1800.00 |  |                                       |         |          |  |                                       |                         |

Numbers, values, costs, and the details of the infrastructure are only to illustrate the financial model and are not indicative of cost estimates or details of the final design.



## **Appendix A    Application Cross-Index**

| Statute      | Requirement   | RFA Reference                  | Applicant's Reference       |
|--------------|---|--------------------------------|-----------------------------|
| 43.90.130(1) | Application must be filed by the deadline   | 1.6                            | N/A                         |
| 43.90.130(2) | <i>provide a thorough description of a proposed natural gas pipeline project for transporting natural gas from the North Slope to market, which description may include multiple design proposals, including different design proposals for pipe diameter, wall thickness, and transportation capacity, and which description shall include:</i>  | 2.1                            | 2.1                         |
| (A)          | <i>the route proposed for the natural gas pipeline, which may not be the route described in AS 38.35.017(b);</i>  | 2.1.1                          | 2.1.1                       |
| (B)          | <i>the location of receipt and delivery points and the size and design capacity of the proposed natural gas pipeline at the proposed receipt and delivery points, except that this information is not required for in-state delivery points unless the application proposes specific in-state delivery points;</i>  | 2.1.1                          | 2.1.1                       |
| (C)          | <i>an analysis of the project's economic and technical viability, including a description of all pipeline access and tariff terms the applicant plans to offer;</i>   | 2.10 and 2.2.3.4               | 2.10 and 2.2.3.4            |
| (D)          | <i>an economically and technically viable work plan, timeline, and associated budget for developing and performing the proposed project, including field work, environmental studies, design, and engineering, implementing practices for controlling carbon emissions from natural gas systems as established by the United States Environmental Protection Agency, and complying with all applicable state, federal, and international regulatory requirements that affect the proposed project; the applicant shall address the following:</i> | 2.2 to 2.8                     | 2.2 to 2.8                  |
| (D) (i)      | <i>if the proposed project involves a pipeline into or through Canada, a thorough description of the applicant's plan to obtain necessary rights-of-way and authorizations in Canada, a description of the transportation services to be provided and a description of rate-making methodologies the applicant will propose to the regulatory agencies, and an estimate of rates and charges for all services;</i>  | 2.2.3.13<br>2.2.4.1<br>2.2.4.5 | 2.2.3.13 2.2.4.1<br>2.2.4.5 |
| (D) (ii)     | <i>if the proposed project involves marine</i>  | 2.1.3                          | 2.1.3 2.2.3.14              |

|               |  |                                  |                              |
|---------------|--|----------------------------------|------------------------------|
|               | <i>transportation of liquefied natural gas, a description of the marine transportation services to be provided and a description of proposed rate-making methodologies; an estimate of rates and charges for all services by third parties; a detailed description of all proposed access and tariff terms for liquefaction services or, if third parties would perform liquefaction services, identification of the third parties and the terms applicable to the liquefaction services; a complete description of the marine segment of the project including the proposed ownership, control, and cost of liquefied natural gas tankers, the management of shipping services, liquefied natural gas export, destination, re-gasification facilities, and pipeline facilities needed for transport to market destinations, and the entity or entities that would be required to obtain necessary export permits and licenses or a certificate of public convenience and necessity from the Federal Energy Regulatory Commission for the transportation of liquefied natural gas in interstate commerce if United States markets are proposed; and all rights-of-way or authorizations required from a foreign country;</i> | <b>2.2.3.14</b>                  |                              |
| 43.90.130 (3) | If the proposed project is within the jurisdiction of FERC, does the Application commit:   |                                  |                              |
| (A)           | <i>conclude, by a date certain that is not later than 36 months after the date the license is issued, a binding open season that is consistent with the requirements of 18 C.F.R. Part 157, Subpart B (Open Seasons for Alaska Natural Gas Transportation Projects) and 18 C.F.R. 157.30 - 157.39;</i>   | <b>2.2<br/>2.2.4.3<br/>2.2.3</b> | <b>2.2<br/>2.2.4.3 2.2.3</b> |
| (B)           | <i>apply for Federal Energy Regulatory Commission approval to use the pre-filing procedures set out in 18 C.F.R. 157.21 by a date certain, and use those procedures before filing an application for a certificate of public convenience and necessity, except where the procedures are not required as a result of sec. 5 of the President's Decision issued under 15 U.S.C. 719 et seq. (Alaska Natural Gas Transportation Act of 1976); and</i>   | <b>2.2<br/>2.2.4.3</b>           | <b>2.2<br/>2.2.4.3</b>       |
| (C)           | <i>apply for a Federal Energy Regulatory Commission certificate of public convenience and necessity to authorize the construction and operation of the proposed project described in this section by a date certain;</i>   | <b>2.2<br/>2.2.4.3</b>           | <b>2.2<br/>2.2.4.3</b>       |





|                      |  |  |                                      |
|----------------------|--|--|--------------------------------------|
|                      |  |  |                                      |
| 43.90.130 (4)        | <i>if the proposed project is within the jurisdiction of the Regulatory Commission of Alaska, commit to</i>  |  |                                      |
| (A)                  | <i>conclude, by a date certain that is not later than 36 months after the date the license is issued, a binding open season that is consistent with the requirements of AS 42.06;</i>  | <b>2.2</b><br><b>2.2.4.4</b>                   | <b>2.2</b><br><b>2.2.4.4</b>         |
| (B)                  | <i>apply for a certificate of public convenience and necessity to authorize the construction and operation of the proposed project by a date certain certain;</i>  | <b>2.2</b><br><b>2.2.4.4</b>                   | <b>2.2</b><br><b>2.2.4.4</b>         |
| 43.90.130 (5)        | <i>commit that after the first binding open season, the applicant will assess the market demand for additional pipeline capacity at least every two years through public nonbinding solicitations or similar means;</i>  | <b>2.4</b><br><b>2.4.1.1</b>                   | <b>2.4</b><br><b>2.4.1.1</b>         |
| 43.90.130 (6)        | <i>commit to expand the proposed project in reasonable engineering increments and on commercially reasonable terms that encourage exploration and development of gas resources in this state;</i>  | <b>2.4</b><br><b>2.4.1.2</b>                   | <b>2.4</b><br><b>2.4.1.2</b>         |
| 43.90.130 (7)<br>(A) | <i>(A) will propose and support the recovery of mainline capacity expansion costs, including fuel costs, from all mainline system users through rolled-in rates as provided in (B) and (C) of this paragraph or through a combination of incremental and rolled-in rates as provided in (D) of this paragraph;</i>   | <b>2.4</b><br><b>2.4.1.3</b><br><b>2.4.1.1</b> | <b>2.4</b><br><b>2.4.1.3 2.4.1.1</b> |
| (B)                  | <i>will propose and support the recovery of mainline capacity expansion costs, including fuel costs, from all mainline system users through rolled-in rates; an applicant is obligated under this subparagraph only if the rolled-in rates would increase the rates<br/>(i) not described in (ii) of this subparagraph by not more than 15 percent above the initial maximum recourse rates for capacity acquired before commercial operations commence; in this sub- subparagraph, "initial maximum recourse rates" means the highest cost- based rates for any specific transportation service set by the Federal Energy Regulatory Commission, the Regulatory Commission of Alaska, or the National Energy Board of Canada, as appropriate, when the pipeline commences commercial operations; (ii) by not more</i> | <b>2.4</b><br><b>2.4.1.3</b><br><b>2.4.1.1</b> | <b>2.4</b><br><b>2.4.1.3 2.4.1.1</b> |

|               |  |   |  |
|---------------|--|---|--|
|               | <p>than 15 percent above the negotiated rate for pipeline capacity on the date of commencement of commercial operations where the holder of the capacity is not an affiliate of the owner of the pipeline project; for the purposes of this sub- subparagraph, "negotiated rate" means the rate in a transportation service agreement that provides for a rate that varies from the otherwise applicable cost-based rate, or recourse rate, set out in a gas pipeline's tariff approved by the Federal Energy Regulatory Commission, the Regulatory Commission of Alaska, or the National Energy Board of Canada, as appropriate; or (iii) for capacity acquired in an expansion after commercial operations commence, to a level that is not more than 115 percent of the volume-weighted average of all rates collected by the project owner for pipeline capacity on the date commercial operations commence;</p> |   |  |
| (C)           | <p>will, if recovery of mainline capacity expansion costs, including fuel costs, through rolled-in rate treatment would increase the rates for capacity described in (B) of this paragraph, propose and support the partial roll-in of mainline expansion costs, including fuel costs, to the extent that rates acquired before commercial operations commence do not exceed the levels described in (B) of this paragraph;</p>  | <p><b>2.4</b><br/><b>2.4.1.3</b><br/><b>2.4.1.1</b></p> | <p><b>2.4</b><br/><b>2.4.1.3 2.4.1.1</b></p> |
| (D)           | <p>may, for the recovery of mainline capacity expansion costs, including fuel costs, that, under rolled-in rate treatment, would result in rates that exceed the level in (B) of this paragraph, propose and support the recovery of those costs through any combination of incremental and rolled-in rates;</p>   | <p><b>2.4</b><br/><b>2.4.1.3</b><br/><b>2.4.1.1</b></p> | <p><b>2.4</b><br/><b>2.4.1.3 2.4.1.1</b></p> |
| 43.90.130 (8) | <p>state how the applicant proposes to deal with a North Slope gas treatment plant, regardless of whether that plant is part of the applicant's proposal, and, to the extent that the plant will be owned entirely or in part by the applicant, commit to seek certificate authority from the Federal Energy Regulatory Commission if the proposed project is engaged in interstate commerce, or from the Regulatory Commission of Alaska if the project is not engaged in interstate commerce; for a North Slope gas treatment plant that will be owned entirely or in part by the applicant, for rate-making purposes,</p>   | <p><b>2.2</b><br/><b>2.2.3.12</b></p>                   | <p><b>2.2 2.2.3.12</b></p>                   |



|                    |  |                                   |                              |
|--------------------|--|-----------------------------------|------------------------------|
|                    | <i>commit to value previously used assets that are part of the gas treatment plant at net book value; describe the gas treatment plant, including its design, engineering, construction, ownership, and plan of operation; the identity of any third party that will participate in the ownership or operation of the gas treatment plant; and the means by which the applicant will work to minimize the effect of the costs of the facility on the tariff;</i> |                                   |                              |
| 43.90.130 (9)      | <i>propose a percentage and total dollar amount for the state's reimbursement under AS 43.90.110(a)(1)(A) and (B) to be specified in the license;</i>  | <b>2.11</b>                       | <b>2.11</b>                  |
| 43.90.130 (10)     | <i>commit to propose and support rates for the proposed project and for any North Slope gas treatment plant that the applicant may own, in whole or in part, that are based on a capital structure for rate-making that consists of not less than 70 percent debt;</i>   | <b>2.2</b><br><b>2.2.3.5</b>      | <b>2.2</b><br><b>2.2.3.5</b> |
| 43.90.130 (11)     | <i>describe the means for preventing and managing overruns in costs of the proposed project, and the measures for minimizing the effects on tariffs from any overruns;</i>   | <b>2.2.3.6</b><br><b>2.2.3.11</b> | <b>2.2.3.6 2.2.3.11</b>      |
| 43.90.130 (12)     | <i>commit to provide a minimum of five delivery points of natural gas in this state;</i>   | <b>2.1.1</b><br><b>2.2.3.9</b>    | <b>2.1.1 2.2.3.9</b>         |
| 43.90.130 (13) (A) | <i>commit to offer firm transportation service to delivery points in this state as part of the tariff regardless of whether any shippers bid successfully in a binding open season for firm transportation service to delivery points in this state, and commit to offer distance-sensitive rates to delivery points in this state consistent with 18 C.F.R. 157.34(c)(8); and</i>   | <b>2.2.3.9</b>                    | <b>2.2.3.9</b>               |
| (B)                | <i>commit to offer distance-sensitive rates to delivery points in the state consistent with 18 C.F.R. 157.34(c)(8);</i>  | <b>2.2.3.9</b>                    | <b>2.2.3.9</b>               |
| 43.90.130 (14)     | <i>commit to establish a local headquarters in this state for the proposed project;</i>  | <b>2.2.5</b>                      | <b>2.2.5</b>                 |
| 43.90.130 (15) (A) | <i>hire qualified residents from throughout the state for management, engineering, construction, operations, maintenance, and other positions on the proposed project.</i>   | <b>2.3.4</b>                      | <b>2.3.4</b>                 |
| (B)                | <i>contract with businesses located in the state;</i>  | <b>2.3.4</b>                      | <b>2.3.4</b>                 |



|                   |   |                                 |                                 |
|-------------------|---|---------------------------------|---------------------------------|
| (C)               | <i>establish hiring facilities or use existing hiring facilities in the state;</i>  | <b>2.3.4</b>                    | <b>2.3.4</b>                    |
| (D)               | <i>use, as far as is practicable, the job centers and associated services operated by the Department of Labor and Workforce Development and an Internet-based labor exchange system operated by the state.</i>  | <b>2.3.4</b>                    | <b>2.3.4</b>                    |
| 43.90.130<br>(16) | <i>waive the right to appeal the rejection of the application as incomplete, the issuance of a license to another applicant, or the determination under AS 43.90.180(b) that no application merits the issuance of a license;</i>   | <b>1.13.7 Appendix D</b>        | <b>1.13.7 Appendix D</b>        |
| 43.90.130<br>(17) | <i>commit to negotiate, before construction, a project labor agreement to the maximum extent permitted by law; in this paragraph, "project labor agreement" means a comprehensive collective bargaining agreement between the licensee or its agent and the appropriate labor representatives to ensure expedited construction with labor stability for the project by qualified residents of the state;</i>  | <b>2.3.3</b>                    | <b>2.3.3</b>                    |
| 43.90.130<br>(18) | <i>commit that the state reimbursement received by a licensee may not be included in the applicant's rate base, and shall be used as a credit against licensee's cost of service;</i>   | <b>2.2.3.10</b>                 | <b>2.2.3.10</b>                 |
| 43.90.130<br>(19) | <i>provide a detailed description of the applicant, all entities participating with the applicant in the application and the project proposed by the applicant, and persons the applicant intends to involve in the construction and operation of the proposed project; the description must include the nature of the affiliation for each person, the commitments by the person to the applicant, and other information relevant to the commissioners' evaluation of the readiness and ability of the applicant to complete the project presented in the application;</i> | <b>2.8</b>                      | <b>2.8</b>                      |
| 43.90.130<br>(20) | <i>demonstrate the readiness, financial resources, and technical ability to perform the activities specified in the application by describing the applicant's history of compliance with safety, health, and environmental requirements, the ability to follow a detailed work plan and timeline, and the ability to operate within an associated budget.</i>   | <b>All of Section 2 and 2.9</b> | <b>All of Section 2 and 2.9</b> |
|                   | <i>Required Documents :</i>   |                                 |                                 |



|  |  |                          |                      |
|--|--|--------------------------|----------------------|
|  | <i>Signed Application with Corporate Approvals</i>   | <b>1.10.4<br/>1.13.3</b> | <b>1.10.4 1.13.3</b> |
|  | <i>Signed Certification, Appendix E</i>  | <b>1.13.3</b>            | <b>1.13.3</b>        |
|  | <i>List of Applicant's Required and Additional Commitments</i>   |                          |                      |
|  | <i>Electronic Copy of Entire Application (On CD in PDF Print Ready Format)</i>                           | <b>1.5</b>               | <b>1.5</b>           |
|  | <i>List of Data for Applicants to Provide in MS Excel Format, Appendix C (On CD in MS Excel)</i>         | <b>2.10.1</b>            | <b>2.10.1</b>        |
|  | <i>Identification of Proprietary Information and Trade Secrets and summary of Information for Public</i> | <b>1.13.6</b>            | <b>1.13.6</b>        |



## **Appendix B    Certifications**



## CERTIFICATION

We certify that we are authorized to submit this Application on behalf of **AENERGIA, LLC** ("Applicant").

We also certify that this application is valid for 9 months or until a license is awarded, whichever comes first.

We agree to "waive the right to appeal the rejection of this application as incomplete, the issuance of a license to another applicant, or the determination under AS 43.90.180(b) that no application merits the issuance of a license;" (AS 43.90.180(16))

We also certify that Applicant and any and all successors and assigns agrees that in the event Applicant is awarded an AGIA License it will: (1) comply with AGIA and its requirements in their entirety, AS 43.90, *et seq.*, as in effect on June 8, 2007, (2) perform all of the actions and fulfill all of the Required and Additional Commitments listed in its Application and as required in Appendix D ; (3) be bound by the License terms and conditions as set forth in Section 4 of the Request for Applications, and (4) abide by, in addition to AGIA, all other applicable laws, rules and regulations. This certification includes Applicant's agreement to act Promptly and Diligently in fulfilling all of the foregoing requirements, commitments, and other obligations.

In addition, we certify under AS 43.90.130(16) that by submitting this Application, Applicant has waived the right to appeal the rejection of its Application as incomplete, the issuance of a License to another applicant, or the Determination under AS 43.90.180(b) that no Application merits the issuance of a License.

Finally, we certify that the Applicant agrees this certification is provided by Applicant as consideration for the inducements provided to Applicant under AS 43.90.110, and that this certification shall remain binding upon the Applicant.



---

Signature: William J Burkhard



---

Signature: Andrew L Taber





## CERTIFICATION

We certify that we are authorized to submit this Application on behalf of **AENERGIA, LLC** ("Applicant").

We also certify that this application is valid for 9 months or until a license is awarded, whichever comes first.

We agree to "waive the right to appeal the rejection of this application as incomplete, the issuance of a license to another applicant, or the determination under AS 43.90.180(b) that no application merits the issuance of a license;" (AS 43.90.180(16))

We also certify that Applicant and any and all successors and assigns agrees that in the event Applicant is awarded an AGIA License it will: (1) comply with AGIA and its requirements in their entirety, AS 43.90, *et seq.*, as in effect on June 8, 2007, (2) perform all of the actions and fulfill all of the Required and Additional Commitments listed in its Application and as required in Appendix D ; (3) be bound by the License terms and conditions as set forth in Section 4 of the Request for Applications, and (4) abide by, in addition to AGIA, all other applicable laws, rules and regulations. This certification includes Applicant's agreement to act Promptly and Diligently in fulfilling all of the foregoing requirements, commitments, and other obligations.

In addition, we certify under AS 43.90.130(16) that by submitting this Application, Applicant has waived the right to appeal the rejection of its Application as incomplete, the issuance of a License to another applicant, or the Determination under AS 43.90.180(b) that no Application merits the issuance of a License.

Finally, we certify that the Applicant agrees this certification is provided by Applicant as consideration for the inducements provided to Applicant under AS 43.90.110, and that this certification shall remain binding upon the Applicant.

---

Signature: William J Burkhard

---

Signature: Andrew L Taber